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FOREST REPORT

OF

THE BOMBAY PRESIDENCY,

INCLUDING SIND.

FOR THE YEAR

1870-71.

Bombay:
PRINTED FOR GOVERNMENT
AT THE EDUCATION SOCIETY'S PRESS, BYCULLA.

1872.

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GENERAL FOREST REPORT

OF THE

BOMBAY PRESIDENCY,

For 1870-71.

REPORT OF THE NORTHERN DIVISION, BY A. T. SHUTTLEWORTH, ESQ., I. N., CONSERVATOR OF FORESTS.

1. The financial results of the Forests of the Northern Division for 1870-71, when compared with the previous year, are satisfactory.

2. The following statement exhibits the gross receipts of the year under report and of 1869-70.

Receipts.

No.	Collectorate.	1869-70.			1870-71		
		Rs.	a.	p.	Rs.	a.	p.
1	Poona	74,241	8	9	76,335	9	8
2	Sattara	20,040	9	0	22,612	11	2
3	Ahmednuggur	12,852	11	1	26,160	11	2
4	Rutnagherry	4,154	11	8	16,507	14	11
5	Khandeish	56,153	8	6	57,865	13	5
6	Tanna and Colaba	1,30,575	6	0	1,38,375	5	6
7	Surat and Dangs	90,694	8	0	55,322	10	6
8	Kaira	1,560	5	8	580	7	8
9	Ahmedabad	8	0	0	692	6	10
10	Sholapoor	.....			171	0	0
11	Nassick	27,457	8	3	22,879	2	9
12	Broach	5,000	0	0	.....		
13	Point States	9,546	2	2	26,084	15	1
	Total.....Rupees	4,32,284	15	1	4,43,588	12	8

3. The only Collectorates in which the receipts of 1870-71 are less than the collections of the preceding year are Surat, Kaira, and Nassick. But with reference to Surat it must be mentioned that upwards of Rs. 67,000 on account of the year's operations were not paid into the Treasury until after the 31st March 1871. Had this sum been collected before the close of the year the results of Surat for 1870-71 would have aggregated Rs. 1,22,000 or Rs. 32,000 more than the gross receipts of that District for 1869-70.

4. With regard to Nassick the difference is owing to the Ankola Talooka, which in 1869-70 formed part of this Collectorate, having since been transferred to Nuggur.

5. In the Punch Mahals no operations have been carried on this year, owing to there being no market and no controlling Forest Officer in that District.

6. The Budget Estimate of the Northern Division for 1870-71 anticipated that gross receipts would amount to Rs. 5,13,724. It has already been shown that the actuals of receipt brought to account are Rs. 4,32,285. If to this sum be added the Rs. 67,000 paid into the Surat Treasury after the close of the year, it will be perceived that the gross receipts of 1870-71 total 5 lacs, and closely approach the estimated receipts of the year.

7 The Forest expenditure of the Collectorates under the control of the Conservator of the N. D. aggregated Rs. 2,15,356-13-3 during 1870-71, against Rs. 2,41,088-9-0 for the preceding year. The Budget Estimate anticipated the expenditure of 1870-71 would amount to Rs. 3,72,392.

8. Thus while actuals of expenditure are more than a lac and a half less than the estimate, they are also a little over a quarter of a lac less than the actuals of expenditure of the previous year, *i. e.* of 1869-70.

9. The following table will show the differences with regard to the several Collectorates.

Expenditure.

No.	Collectorate.	1870-71			1869-70.		
		Rs.	a.	p.	Rs.	a.	p.
1	Poona	37,452	13	5	33,821	6	11
2	Sattara	10,548	13	0	10,761	11	6
3	Ahmednuggur	3,632	13	1	3,169	5	10
4	Ratnagherry	11,813	13	8	10,400	8	7
5	Khandeish	15,747	7	4	43,031	1	9
6	Tanna and Colaba	75,216	13	10	92,130	2	8
7	Surat and Dangs	41,686	7	0	34,735	8	1
8	Kaira	1,198	15	6	3,365	15	9
9	Ahmedabad	195	3	4	494	6	0
10	Sholapoor	38	10	0	.....		
11	Nassick	14,409	8	9	6,441	5	9
12	Point States	3,115	6	4	2,737	0	2
	Total.....Rupees	2,15,356	13	3	2,41,088	9	0

10. It has been stated above that the receipts of 1870-71 amounted to Rs. 4,43,588-12-8, and the expenditure to Rs. 2,15,356-13-3. The net Forest revenue of the Northern Division for the year therefore Rs. 2,28,231-15-5.

11. This is Rs. 39,035 in excess of the net revenue of the Northern Division for 1869-70 and Rs. 86,899 in advance of the sum which the Forest Budget of 1871-72 estimated that the net revenue of the year would represent.

12. It must also be mentioned that the revenue of the year has been obtained without any extensive calls having been made on the standing timber in the Forests.

13. The value of stock on hand in the Forests of the Northern Division on the 1st April 1871 was Rs. 1,31,127. There is a difference between these figures and the figures representing the value of the balance of stock shown in the last Annual Report. This is owing to errors in the Punch Mahals and Nassick statements, Rs. 7,000 were inserted as the value of stock on hand in the Punch Mahals on 1st April 1870, whereas the correct sum was Rs. 13,962, and in Nassick Rs. 6,689 appeared instead of Rs. 8,454.

14. Tanna and Sattara are the only Collectorates which at the close of 1870-71 show an increase of stock. This increase is trifling, it only amounts to Rs. 2,006.

15. The decrease on the other hand is large, Rs. 54,160. Surat, Poona and Ahemednuggur had no timber remaining unsold on the 1st April 1871. Nassick, Rutnagherry, Tanna, Colaba, and Peint had all their stock cleared off before the season closed.

16. Realizations during the year on account of outstanding balances due to Government for timber and Forest produce at the close of 1869-70 amounted to Rs. 4,214-9-0. On the 1st April 1871 Rs. 50,520-11-10 represented the "outstandings" due to Government, being the amount that remained to be paid into the Government treasury on account of Forest produce sold during 1870-71.

17. There were no outstanding advances to contractors in the Northern Division on the 31st March 1870, and there are none on the 31st March 1871. The only outstanding balance is the sum of 1,000 Rupees, being the permanent advance to the Assistant Conservator of Forests, Surat, to enable him to carry on planting and other operations in progress in the Forests under his charge.

18. *Free grants of wood*, to the value of Rs. 15,478-0-6, were made in 1870-71, against Rs. 19,219-3-6 given away during the preceding year. Colaba heads the list with Rs. 5,655-1-0. The only other very extensive grants were made in the Punch Mahals.

19. Government have ruled that free grants of wood may be made for charitable purposes, and also to propitiate cultivators and others residing in the neighbourhood of Forests. These free grants are made from the property under charge of the Forest Department, and as the giving away of a large quantity of timber in a District cannot but tend to lower the market price of wood in that District, the Forest Department should invariably be consulted before free grants are made. From the orders of Government it would appear that it is intended the Forest Department should be vested with the power to make free gifts of wood, and not the Revenue Department. The interests of the latter not being affected by the quantity of timber given away and distributed over the country.

20. During the year under report wood from the Government Forests has been granted free of charge for building Wells, Dhurumshallas, Chowries, Temples, &c. The Local Funds of the District should bear the cost of timber required for purposes of local benefit and improvement.

21. *Forest Offences.*—Six hundred and eighty-six cases were presented for trial during 1870-71, against 650 in 1869-70. Convictions obtained in 512 instances against 509. Fines aggregated Rs. 3,946-12-0. About three-fourths of the sum realized under fines in the preceding year. Rs. 1,953-10-0 represented the value of stolen property recovered from thieves during the year under report.

22. *Communications and Buildings.*—Six miles of the proposed road through the Dang Forests have been completed.

23. The Forest road intended to open out the Band reserves of Dapooli has been continued on a distance of two miles— heavy ghaut work.

24. The Forest Officer's bungalow at Alibag has been completed; the building is strong and substantial, and the work has been satisfactorily performed.

25. Demarcation of Forests has progressed in the Poona, Nassick, Sattara, and Colaba Districts. Where land was available extensive blocks have been set aside for Forest purposes, and their boundaries have been defined by distinguishable marks.

26. *Plantations.*—This most important branch of the duties appertaining to the Forest Department has not been neglected. Every possible attention has been given towards increasing the timber and fuel producing resources of the Districts composing the Forest Department Northern Division. In the Northern Konkan, the Dangs, and the Punch Mahals the necessity of forming new plantations is not apparent, the country being well wooded. But in the Deccan Districts above the Ghauts, and in the Rutnagherry Collectorate, where the country in former years has been greatly denuded of its tree covering, planting operations should be carried on systematically and with vigour.

27. This report will show, I trust, that in the Districts of the Northern Division, where planting operations are being conducted by

officers of the Forest Department, the work is being efficiently executed; generally speaking the results are satisfactory, and Government money is not being wasted.

28. *Establishment.*—During the year the Forest Department of this Presidency has sustained a loss by the death of Mr. Charles McLeod Paradise, who was in charge of the Nassick and Peint Forests. This officer died at Nassick on the 12th January 1871, from dysentery and jungle fever, contracted from exposure while out in the Forests in the performance of his duty.

A. T. SHUTTLEWORTH,
Conservator, N. D.

PROGRESS REPORT OF FOREST ADMINISTRATION IN THE SOUTHERN DIVISION, BOMBAY PRESIDENCY, FOR 1870-71. BY MAJOR W. PEYTON, M.S.C., CONSERVATOR OF FORESTS.

Revised Administration.

During the year under report a revised system of Forest Administration has been inaugurated at the suggestion of Dr. Brandis, Inspector General of Forests, Bengal, who, in 1868-69 and 1869-70 made a tour of inspection of the Forests of this Presidency. The Presidency is now divided into two divisions, a Northern and Southern, each under the separate charge of a Conservator.

The Southern Division.

2. This Division, comprising the Collectorates of Canara, Belgaum, Dharwar, and Kulladghee were placed under my charge, vide para. 11 of Government Resolution No. 3756, of the 6th August 1870, and subsequently in the Bombay *Government Gazette* of the 11th May last, I was appointed Conservator of Forests from the 21st October following. Beyond this no further change took place, the additional Range Officers with the revised subordinate establishment having been appointed after the close of the official year 1870-71.

Approximate Area.

3. The approximate forest area of this division is 3,792 square miles, over the greater part of which teak and many other valuable kinds of timber trees of fine growth abound.

Retention of Executive duties in the Balaghauts of Canara in addition to new charge.

4. Under the head of "Inspection Tours" mention will be made of the Forests, Southern Division, other than those of Canara, which it was possible for me to visit, retaining as I did the executive duties of the Balaghauts of Canara, where operations were extremely heavy and consequently great supervision necessary.

Estimated Receipts and Expenditure.

5. In the Budget for the year under report the receipts were estimated at Rs. 4,78,095, and the expenditure at Rs. 2,71,101.

Results.

6. The results have, however, been more favorable in both respects than anticipated, the actual receipts having exceeded the estimate by Rs. 40,793-12-6, while on the other hand the expenditure is Rs. 41,325-5-9 less.

Forest Revenue.

7. The total receipts of the Forests, Southern Division, for 1870-71 amounted to Rs. 5,18,888-12-6, and the expenditure to Rs. 2,29,775-10-3, leaving a net revenue of Rs. 2,89,113-2-3.

In the preceding year the figures stand—gross receipts Rs. 5,75,162, gross outlay Rs. 1,73,040, leaving a surplus of Rs. 4,02,122, as the net revenue of the Forests. The falling off therefore in the net receipts of the year amounts to Rs. 1,13,009. Credit must, however, be taken for the increased value of stock on hand at the close of the present compared with that of the preceding year, so as to arrive at a clear understanding of the transactions of each. This, the following contrasted statement shows at a glance :

	1869–70.	1870–71.
	Rs.	Rs.
Net revenue	4,02,122	2,89,113
Value of stock on hand	1,28,874	2,85,616
Outstandings	1,70,271	1,24,391
Total.....	7,01,267	6,99,120

The actual decrease is therefore but Rs. 2,147.

The falling off in receipts and increase in stock where noticed.

8. The falling off in actual cash receipts has been in Canara, where also has been almost entirely the increased value of wood in stock. There has been an increase in Dharwar of only Rs. 8,882, whereas in Belgaum there has been a decrease of stock to the extent of Rs. 19,179.

Falling off of Revenue how accounted for.

9. I attribute the falling off in cash revenue to the very depressed state of trade, generally, throughout the country, and a Forest system rife in the adjoining province of Mysore, whereby people cut and removed wood on the payment of a fee of from Rs. 7 to Rs. 9 per cart-load of squared timber.

10. To such an extent was this carried, that the axemen (Wudders) of the Eastern part of Canara, who were engaged on our Departmental works, almost fairly left us in a body with their carts for the Mysore Forest, and from there exported into the Southern part of the Dharwar Districts, usually supplied from Canara, considerable quantities of wood. The very report even of these people being so engaged in exporting timber from the Mysore Forests, under the terms alluded to in the preceding para., had a depressing effect on the Canara sales, so much so, that the wood dealers, most of whom are known to me, referred to it at the time I was superintending the sales, and afterwards when I visited Hooblee, a great mart for the sale of timber.

Export of wood by Canara axemen from Mysore.

11. It is difficult to understand why the Mysorians should have introduced the stump fee system into the working of their forests, for all others it is the most objectionable and destructive.

12. I hope I may be pardoned for thus digressing from the subject of my report, but it would appear to me better and necessary to explain all circumstances having a tendency towards diminishing our Forest revenue.

13. With the market open to all, and the Forests of the neighbouring provinces worked on a sound system that admits of a thorough and efficient control being exercised, Canara, with its vast forests of large timber and departmental working can compete successfully, but it would be hopeless to expect the same favorable results as heretofore, when opposed to a license system of the kind referred to, that allows of building timber to be felled and removed by any person with an axe and cart, preferring a fee of from Rs. 7 to Rs. 9. It will be found that this fee is about the price paid for the same quantity of ordinary firewood over many parts of the country, and that such a price could be remunerative only under such a system, the evils of which wherever tried are but too well known.

14. From the reasons given above the value of stock in hand in Canara increased from Rs. 90,935 on the 1st April 1870 to Rs. 2,57,974 on the same date in 1871, there being a difference in favour of the latter year of Rs. 1,67,039. As shown in para. 8 an increase of stock in Dharwar

Increase in Stock.

to the extent of Rs. 8,882 has taken place, whereas in Belgaum there has been a decrease to the extent of Rs. 19,179.

Yield of Forest produce.

15 The yield of Forest produce is shown in Statement III. appended, and may be excepted as a remarkably good season's work.

Increase of Bamboo revenue.

16. The large revenue derived from bamboos in Canara is worthy of notice. From Rs. 11,608-7-8 in 1869-70 it has increased to Rs. 23,143-14-0 in the present year under report. This is entirely due to the stricter watch and consequent decrease in smuggling that formerly went on. In Belgaum, too, where the Canara system has been lately introduced, a proportionate increase may be looked for next year.

Seignorage on Timber.

17. The seignorage fees levied on timber, firewood, and charcoal in Canara, for local use only, under the recognized permit rules, amounted to Rs. 24,204. The rules referred to do not exist in the other Collectorates of the Southern Division.

Free grants.

18. Free grants amounting to Rs. 4,627 were made for the re-building of houses destroyed by fire and the repair of religious edifices.

Outstandings on account of sales recovered.

19. The outstandings due Government on account of wood sales in former years amounted, on the 1st April 1870, to Rs. 1,70,271-5-4, of this sum Rs. 1,16,680-1-10 were collected during the year.

Outstanding advances against Contractors.

20. On the 31st March 1870 the outstanding advances against the contractors stood at Rs. 60,677-4-0 and those made during the year to Rs. 28,757-2-0, on account of these recoveries in cash amounting to Rs. 2,384-4-2, and by work done, *i.e.* timber brought from the Forests to the Depôts to Rs. 61,508-5-3 were written off, leaving only a balance of Rs. 25,535-12-5 to the debit of the Deputy Conservators and contractors on account of Forest operations in progress.

Depôt sales by auction and retail.

21. The periodical sales by auction have, considering the exceptional year passed through and other causes before explained, been on the whole fair. The transactions though at the retail firewood Depôts at Dharwar and Hooblee have been just the reverse, and through mismanagement in bringing in green wood, the delivery of which was paid for by weight, much loss was occasioned. This will be seen to and I hope prevented in future by the introduction of a different system.

The most satisfactory sale throughout the year in the Dharwar Talooka was at the Kulgutghee Depôt, where, at public auction, 3,306 rafters and sotas realized the sum of Rs. 7,307-15-6. The cost of collection of this material amounted to the low figure of Rs. 250-1 2-0 only.

Communications.

22. Every attention has been directed to the opening out and repair of Forest roads. The sum expended on this account amounted to Rs. 20,505, mostly all of which was in Canara. To one work, the Teegaum bridge over the Tattahalla Nulla, between Hullial and Belgaum frontier, the Forests gave a moiety of Rs. 8,940, and the balance Rs. 11,565 was expended on the other many communications, the chief and most important one being the road from Hullial towards Goond. Much progress has been made in this work which is now open to Potelli, a distance of something over 20 miles. The rocks that have hitherto obstructed the passage of the carts at the ford above Dandilly, on the Kalanaddy river, have been removed by blasting, and carts can now pass over without the trouble of unshipping the timber logs to the other carts kept on the Depôt side of the river.

This road is intended to connect the Forest of Goond with the Hullial Depôt, and will run parallel to the fine teak Forests of Seerooli, Mundoorli, and Hoodasay along the Kanaree Nullah, and if ever road steamers are introduced to assist in working the Forests will play a very important part.

Logs cross-cut with the saw.

23. The saw, in cross-cutting logs, continues to take the place of the axe, and the introduction of it has saved, as may be readily imagined, much waste.

Forest offences.

24. The number of forest offences committed during the year under report amounted to 161, convictions obtained 130, fines imposed Rs. 1,664, and wood to the value of Rs. 314 sold.

Steam Saw Mill in Canara.

25. For this an indent has been submitted through the Secretariat on Her Majesty's Secretary of State for India. The greatest benefits are expected to result from its introduction, for much of the hollow and unsound timber of large girth, that fills our Forests everywhere, may be utilized, and the Public Departments of the various Districts supplied from Canara, saved at least one-fourth their expenditure on timber and carriage of it. For sleepers too, for which Canara is now looked to supply, it will be invaluable. For the purchase of the Mill Rs. 10,000 have been made available and remitted.

Large Timber and requirements of the Public Departments.

26. Great attention is now paid in Canara to the selection of large and perfectly matured timber, both straight and curved, for ship building purposes. The indents of Her Majesty's Dockyard authorities and other Departments at Bombay were unusually heavy during the year. Unfortunately a fractional part only of these requirements could be met, as the stock in the Coast Depôts was inferior and unsuited for the purpose required.

To meet these urgent requirements pressed upon the Department in Canara soon after charge had been made over to me, I felt that special steps were necessary. Application was therefore made for a further Budget grant of Rs. 30,000 for the purchase of elephants, plant and advances necessary to carry on the work. This sum, though made available,—vide extract from the Proceedings of Government in the Revenue Department No. 5592, dated 12th November 1870,—was not expended or touched, owing to the difficulty experienced in purchasing or hiring elephants.

Exorbitant demands of Contractors.

27. It had, however, the very desirable effect of reducing the exorbitant demands of the contractors who, seeing their opportunity in our urgent requirements and difficulties, asked unheard of high rates; this checked a commencement of the proposed operations. These rates were afterwards brought down from Rs. 16½ per candy

of 1½ cubic feet to Rs. 8½ and 10 by steady determination to carry on Departmental work the moment we were in a position to do so and rejecting all offers of the Contractors until they reduced them to the latter just named, viz. Rs. 8½ and 10. These, until we are able to test the actual cost ourselves, must be looked upon as moderate, or at least the lowest sums for which we can get the work done. Undoubtedly the distance from the coast to the forests, where work is going on, is far, and the transit of the timber rendered difficult in consequence of the many shallows and obstructions in the river, and the hilly nature of the country from which it has to be dragged to the floating points.

Endeavour to purchase Elephants a failure.

28. In the meantime my efforts to purchase or even hire Elephants completely failed.

The Resident at Travancore, Conservator of Forests, Madras, and Collector of Mangalore were all written to, besides notifications made in the Mangalore Official Gazette inviting tenders for the sale or hire of elephants. At one time I thought I had succeeded in securing the services of three of these animals, and accepted an offer made regarding their hire, and subsequent purchase if approved of; but when it came to the drawing up of an agreement the owner repudiated his former offer and asked rates and terms so high as to lead me to suppose that it was possible he might have been influenced from North Canara. However the negotiations fell to the ground.

From the Bhownuggur Durbar we had offers of elephants for sale there, but then these animals were untrained, and consequently useless.

Difference of opinion regarding Khan and Bhetta lands in Canara.

29. A difference of opinion regarding the respective rights of Government and the Ryots on these lands has arisen between Mr. Shaw Stewart, the Collector of Canara, and myself. His views are, that Government Resolution No. 2451 of the 18th June 1869 confer upon the Ryots the right to cut the trees on all Bhetta lands before the demarcation and apportionment of them by the Revenue Survey. Also, that the Canara Permit Rules give the right of timber in the Pepper Khans to the people who pay assessment for the privilege to collect pepper.

Now the Permit Rules are mere temporary ones not finally sanctioned by Government, and whilst in force are simply only to regulate the conduct of the Officials of the District with reference to the privileges to be accorded in the matter of wood for household and agricultural purposes, &c., and timber trees growing on land upon which assessment has been paid uninterruptedly since 1844, but that they apply to primeval forests, within the limits of which it has been the practice to take a small and merely nominal assesment to collect pepper, leaves, &c. I cannot believe, for such vast rights andp rivileges never to my thinking could have been conferred by Government in a set of temporary rules. During the time I have been in Canara, since January 1866, I have not once known the right of Government to the trees on both Khan and Bhetta lands questioned. The people never to my knowledge enjoyed or claimed them. Further, there appears to me a very great objection to allow this right to be exercised by the people, insomuch as the Khan or evergreen forests help to fertilize the country by generating and preserving the natural springs which would most undoubtedly cease with their destruction.

Good Conduct of the Canara Subordinate Establishment.

30. I have again with much satisfaction to report the good conduct of the Canara Subordinate Establishment which has done its duty well. Under the new organization mostly all the deserving men have been promoted.

The question, however, of batta to Mr. Fernandez, lately promoted to Sub-Assistant Conservator, has not been settled, though I have submitted, as required by para. 23 of Government Resolution No. 5441, of the 7th November 1870, a separate letter to the Revenue Commissioner on the subject.

Forest operations in the Dharwar and Belgaum Collectorates unsatisfactory.

31. The Forest operations in the Dharwar Collectorate were not satisfactory, and I may say also neither were those of Belgaum until the last four months of the official year under report. Mr. Hilliard, now Assistant Conservator in Belgaum, had the joint charge of both. This was too much for him, and he complained, with some show of reason, that he had three masters to serve, meaning the Collectors of Belgaum and Dharwar and the Conservator, and that his double charge was too much and too extensive for him

to do it justice. In partly agreeing with him in this, I cannot but think he might have done very much more than he did, and that further exertion on his part together with a fair amount of supervision of the firewood operations in the Dharwar forest would have turned the working of the Dharwar and Hoobly Depôts into a success instead of a failure, for had a personal inspection of the operations conducted by his Subordinates in the Forests been made by him, the sending in of green wood full of sap to the Depôts, there to be paid for by weight on delivery would doubtless have been prevented, and the loss by dryage and wastage, that took away nearly all profit, avoided. In Belgaum until towards the close of 1870, there appears to have been no system whatever. People collected and removed material from all parts of the forests at pleasure, under cover of a pass. Wood was also felled and disposed of by sale within forest limits, and often actually without the slightest pretence or attempt at collecting it together, leaving great room for mal-practices by the purchasers, and even the subordinates of the Department. To stop this and introduce something like order and system into the working operations here, I directed Mr. Hilliard to leave for the Belgaum Districts early in November, and instructed him as to my wishes. For reasons which I have never been able to understand he delayed his departure a long time, was reported to Government, and incurred severe censures. After he did go out, however, he did excellent service during the last four months of the year. Blocks of forests were, after a careful inspection of their capabilities, demarcated and operations strictly confined to them, sites for depôts, watch houses, &c., were also fixed upon, and every minutiæ of detail well carried out; in fact on the whole I had good reason to feel satisfied with what he had done, and under the new organization that has given me an Officer for each Collectorate, though the loss and mistakes of the year under report will be seen in the present years' report when made, much improvement and satisfactory progress may be confidently looked for.

Improvements of Forests and Conservancy in Darwar much required.

32. To effect improvements in the Dharwar Forests it is my duty to state, that without a more liberal allowance of funds than heretofore sanctioned, it will be hopeless to attempt a scale of operations likely, both at the time and hereafter, to

improve the personal of them, and reflect credit upon the Officers concerned. The working charges, under the head of timber expenses, are invariably cut down to a sum inconveniently small and inadequate to supply the wood requirements of this District, where Departmental working should not, if the Forest tracts are to be improved and protected, be deviated from.

Reasons for more strict Departmental working.

33. The necessity for more strict management and Departmental working of the Forests in the Dharwar Collectorate than most others is that, from former leasing of tracts to cut firewood in and a license system, the most that could be got out of them within a given time was taken, without any reference whatever to what they could fairly yield. The consequence is, that being on the borders of rich and populous Districts, where wood requirements of all kinds are large, and the meeting of the demand usually in the hands of the "Lumbanees," professional wood stealers, they are always, under a license system, in danger of exhaustion, and to this system, if sufficient funds are not allowed for departmental working, we must fall back, for if the people cannot get what they want from one or other of the two systems, they will most undoubtedly steal from the forests, what is to them a daily necessary, and escape detection in many ways.

Permit system reduced to a minimum.

34. To Mr. Robertson, the present Acting Collector of Dharwar, great credit is due for his praiseworthy efforts in introducing Departmental working, establishing Depôts for the sale of wood and reducing the permit system to the smallest dimensions.

Difficulties to contend with in protecting the Forests.

35. In addition to the many difficulties we have to contend against in protecting the Government Forests in the Dharwar Collectorate, they are further increased by having many Inam holdings intermixed with them, and I would recommend some scheme whereby the Inamdars might be induced to part with their forests, or lease them to us for a term of years.

I am quite of opinion if this were done one of the main difficulties against the conservancy and improvement of the Dharwar Forests would be at once removed. At present, under the cloak of

removing wood from off Inamdars' lands, it is taken from the Government Forests with but little chance of detection. To any one visiting certain parts of our Forests, where neither Departmental working is going on, nor yet wood removed on permit, this would at once be apparent. True it is that every now and then people are caught and evidence sufficient to convict them proved, but for the one case so proved numbers cannot, however strong the presumptive evidence may be.

Forward state of demarcation arrangements in Hungul.

36. To Mr. Robertson, the Acting Collector, and the interest he takes in the Forests of his Collectorate, we are indebted for the forward state of arrangements for the demarcation of the Forest Reserves. Those in the Hungul Talooka have been mapped out, and the erection of suitable boundary pillars can be proceeded with on receipt of the sanction of Government.

Plans for the other Talookas.

37. The plans and arrangements for the demarcation of the forest reserves in the other Talookas are also in a forward state.

Increased demand for wood.

38. Before concluding my remarks on the Dharwar forests, I would observe, and it will be seen from statement X. attached, which gives a fair approximate view of the forest transactions from 1861-62 to 1870-71, that on the whole the public demand for wood has been steadily increasing in this Collectorate, until last year it reached Rs. 53,488-1-4.

Forests, Beedi Talooka, inspected.

39. During the month of March last year I made a careful inspection of most of the Forests in the Beedi Talooka, Belgaum, that I had not before seen.

Growing Stock observed in Beedi Talooka.

40. The Forests of this Talooka are exceedingly promising, far more so than I was previously aware of, and though in many parts extensively "Koomreed" some years ago, they now contain quantities of young stock, both of Teak and Junglewood, of a very promising kind and of regular growth coming on. In them are also to be found numerous teak, blackwood and junglewood trees of fine proportions.

Some from extreme age are hollow and worthless. Others defective but capable of yielding fine timber when cut up, and lastly, trees in their prime which it will be well to take out and turn into revenue. From 400 to 500 trees can, I opine, be taken out yearly, and to the advantage of these Forests for the next 15 years.

It is clearly a misuse of property to allow it to decay and get into a useless state, besides which the immense produce stock of these forests coming on towards maturity justify operations on a larger scale than the cutting yearly of a few thousand poles from off Ryots' holdings.

Timber trees.

Teak.
Blackwood.
Terminalia Glabara.
" Belerica.
" Paniculata.
" Chebula.
Ingaxylocarpa.
Jangerstromia Macrocarpa.
Artocarpus.

41. The kinds of timber trees of value to be found in the Beedi Forests are shown in the margin, Teak, Ingaxylocarpa and the Terminalia Chebula being the most plentiful. The right to collect the fruit and galls of the latter, which are exported to Bombay *viâ* Vingorla in large quantities, is yearly sold for from 10,000 to 13,000 Rupees.

In some of the Khans or evergreen Forests, trees of large size are to be found in numbers, but they are soft, though useful for many purposes.

Provision made for working.

42. For the working of these Forests and the construction of Forest road between them and the river Mulpurba at Khanapoor, 18 miles from Belgaum, provision will be made in the Budget for 1872-73.

The Mulpurba river.

43. I would here mention that the river Mulpurba affords excellent means of rafting timber and bamboos towards the large towns situated in parts of the Belgaum, Dharwar, and Kulladghee Collectorates, where timber is scarce, and, in consequence of the high cartage rates demanded from the Depôts along the line of Forests, often placed beyond the means of many people.

Kulladghee.

44. The Kulladghee Forest tracts or scrub jungle require to be visited before any remarks can be made regarding them.

45. Under the head of "Plantations" detailed information will be afforded regarding these operations. Excepting in Canara I regret to say they have not being very successful.

Para. 57.

46. In Canara, planting has been confined to the three plantations capable of extension, viz. Cadra, Murdee, and Singutgherry.

Extent of planting in Canara.

The two former were raised by Mr. Barret, on the Kullanuddy river, and the latter by myself within six miles of Hullial.

On the 96 acres taken up during the year, and added to the above plantations, 117,132 teak seedlings were planted out.

47. Having noticed in many reports the difficulty experienced by Forest Officers in getting teak seeds to germinate freely in Nurseries, it may be useful to offer a few remarks on the subject, and give in detail the method successfully followed in Canara.

Introduction to remarks on raising Teak Nurseries.

This method, arrived at by observing the germination of teak seed after fires in the Forests, and repeated failures when following the generally recognized rules of putting the seed into nearly boiling water for several hours previous to sowing and then watering for from 18 to 25 days, may be trustfully and confidently accepted as the most economical and certain means of getting a good crop of seedlings.

48. On taking up land for planting it is usual to select a site for a nursery from which seedlings can be most conveniently drawn and distributed. If the operations are to be extensive it will be found best to select two or three sites, so as save the seedlings from being carried a long distance, as the fresher they are and less injury they sustain the less chance of failure in striking root without a check to growth.

Method followed in Canara.

The sites should now be turned up into big clods, and when dry broken with a mallet, after which fine mould from the adjoining forests should be freely mixed, beds of from 3 to 4 feet in width formed, and the seed after careful selection put down and covered over with not more than 2 inches of fine mould. No attempt for the

first year should be made to force the seed to germinate, neither should the beds be disturbed. All grass and rubbish should also be allowed to grow and accumulate. A fortnight or three weeks previous to the setting in of the rains, the beds, with the addition of dry grass, bamboos, and rubbish should be well fired, and after being loosened with a pick, watered for a couple or three days freely, when an almost simultaneous germination will be found to take place. This can be carried on from year to year, the sowings in the nurseries being always in advance by one year of the planting out operations.

Method also tried with success.

49. Should seedlings be required immediately for planting out, they may be raised to about one quarter of the quantity of seed sown in the following way. Turn up the nursery site into big clods, and before breaking them cover thickly over with dry bamboos, grass, and rubbish, which when fired will almost bake the clods, then break them up and form the beds as above.

The seed should now be but just covered over in the ashes and will come up with the first few showers of rain without any watering. If watered by the hand it must be done lightly. This method, though not likely to produce a crop equally as fine as that to be got by following the first described, will give results far more satisfactory than the nearly boiling process the seed has to go through previous to sowing. This latter method I have found exceedingly uncertain and disappointing.

Teak seed how best forced to germinate.

50. To generate heat, and so apply a forcing process all at once to induce the kernels within the hard shell of the teak seed to swell and burst their cells, would appear to me the one and all important object, and this can be best arrived at, in my opinion, from the observations I have made in the forests, by, in the first place, putting the seed for a year in the ground to get the outer fibrous and sponge-like substance to decay, and then by means of fire above, to be followed by a damp fermenting warmth brought on about the commencement of the rains by showers with intense solar heat following.

It will be found also that after the first month of the rain all attempts to raise seedlings from seed will fail. This is in conse-

quence of all warmth having left the soil, and the impossibility to get up the necessary fermenting heat brought on by the early showers on a sunbaked surface.

Experiments tried.

51. In July last year I tried the experiment of enclosing a small bit of ground. On this 2,000 pits 15 inches in diameter, 8 inches deep, and 6 feet apart were opened. In each 4 seeds were placed and allowed to remain so till the end of May following, when the ground was fired. Unfortunately for the complete success of this experiment the firing did not take place until too late, and after fresh green grass had sprung up, with the heavy showers towards the end of April and the end of May. This prevented the extreme heat that I maintain is necessary for the germination of all teak seeds, but it nevertheless furnished me with further evidence as to the correctness of my ideas, for wherever the grass over the pits was well burnt, there the seeds came up—in many the whole four seeds put down germinating. A better and cheaper plan would be to run furrows with the plough in parallel lines, four feet apart, and sow seed copiously along the furrows, or if cross furrows were run, at the point of intersection, and then, having allowed the ground so operated upon to stand for 12 months and the grass to grow, fire the whole.

Result of the sowing

52. In the 200 pits of the 2,000 above referred to, seedlings sprung up a few days after the firing, and my Inspector on examining some of the other pits found that the seed had lost the outer fibrous substance, and that in many the bursting and germinating process was taking place.

Further experiments desirable.

53. This is an exceedingly interesting subject, and the importance of trying further experiments manifest, for if it is found that the seed freely germinate in this way, and I may say it is already shown they do, the expense attending the collection of labour, cost of raising seedlings from seed, and transplanting operations, may be done away with to a great extent, and the cost of raising teak plantations reduced to a minimum,—less than one-fourth the usual outlay will be found sufficient, besides which, hill sides, the best position for teak, but bothersome to plant in consequence of the difficulty in

raising nurseries and carrying about seedlings, may without much trouble be sown and fired in the way mentioned.

54. In fact it will be seen that nearly the whole labour is gone through before the regular setting in of the monsoon, which is the only time transplanting can be attempted.

55. Before concluding this subject I would ask other Forest Officers elsewhere to give this plan a trial, and note the results in their yearly reports.

Reproduction of Teak when most observed.

56. I would further mention in support of what I have said, and it must be well known to all Forest Officers, that after the jungle fires and a few showers of rain, the great reproduction of the forest in teak seedlings takes place. This cannot fail being noticed, whereas in the unburnt parts the contrary will be found. Of course once the reproduction is obtained fires must be kept out until the trees are old enough to take care of themselves.

PLANTATIONS, SOUTHERN DIVISION.

CANARA.

Bommunhully.

57. This plantation, before reported as being in area about 20 acres, and incapable of extension, is on the whole progressing favourably. The soil is unequal, and therefore there is a great difference in the appearance of the plants, which number about 23,000, and are from 1 to 18 feet in height. The expenditure for the year has been Rs. 108.

Singutagherry.

58. This teak plantation has had 22½ acres added to it during the year, on which has been put down 27,132 teak seedlings. The cost of this amounted to Rs. 1,227-6-6, or an average of 22 plants to the rupee. The total number of acres now enclosed are 82½, and the plants growing within the fence number 78,509. The growth on parts of this plantation is remarkably good, the plants being strong and healthy, and from 1 to 31 feet in height. In addition to the seedlings planted out as shown above, 2,000 small pits of 15 inches in diameter, 8 in depth, and 6 feet apart were opened; in each of these pits 4 seeds were placed in May 1870, and treated as described in paras. 51 and 52 of this report.

59. The *Yellapoor*, *Allhully*, and *Bunwassee* plantations which were closed last year, have not been added to, neither has there been any expenditure made on account of them. They are of small area, incapable of extension and of little account.

Murdy.

60. This teak plantation had, at the end of 1869-70, 1,25,191 teak plants, averaging in height from 1 to 25 feet growing upon it. To this number 20,000 have been added during the year, the planting cost of which amounted to Rs. 1,194-13-0, or nearly 18 plants per rupee. In addition to the planting expenses Rs. 671-4-6 have been spent on it during the year in superintending and clearing fire paths and creepers.

The plants are strong, healthy, and average from 1 to 28 feet in height.

Cadra.

61. This teak plantation was commenced in 1867-68, and has a present area of 154 acres, capable of being extended considerably. In 1869-70 it contained 1,28,369 plants, and during the monsoon of 1870-71, 70,000 seedlings were planted out. Of these latter about 10,000 are reported to have died from extreme heat or choked by the exuberance of the under-growth (principally the latter, from what I saw of the plantation in November last) so that there remains accounted for a total of 1,83,369 plants now growing, with an average height of from 6 inches to 20 feet.

The total expenditure on the Cadra plantation during 1870-71 amounts to Rs. 4,704-11-10, but of this sum only Rs. 3,800-7-0 have been expended on the planting operations, the balance of expenditure Rs. 904-4-10 being for superintending, clearing away creepers, and guarding the plantation against fire.

The average cost of raising the seedlings from seed and planting out appears to be a little less than a rupee for 19.

Ankola.

62. The soil of this plantation is quite unsuited for the growth of teak, and no extension of it after this will be allowed. The present plants will however be looked after and the fence repaired so as to keep out cattle.

The number of plants growing on the plantation at the end of 1869-70 amounted to 26,650; to these were added 4,100 seedlings

from the nursery in 1870-71, at a cost of Rs. 239-7-11, or about 18 plants the rupee. I regret, however, to have to report that a fire ran though a part of this plantation and destroyed 9,044 plants, so that the number now growing is but 21,706. I have no doubt, however, that the roots, which are but seldom killed by fires, will throw out fresh shoots again during the present monsoon. Once teak gets a hold of the soil it is a very difficult thing to root it out.

The plants on this plantation are an average height of from 3 inches to 18½ feet.

Soolagherry.

63. This is an old plantation of some 12 years' standing. The young teak trees number about 20,800, and are from 35 to 50 feet in height. In fact they have arrived at that stage of existence as to be able to take care of themselves; there has therefore been no expenditure on account of this plantation during the year. Next year I hope to have them thinned out considerably, as it is not possible for them to improve much in girth as long as they are allowed to stand so close to each other.

Carwar.

64. This firewood plantation, consisting of 23 acres of sea beach within a mile of Carwar, contains 12,500 plants of various kinds which have considerably improved since last year. The cost up to the 31st March last was Rs. 1,844-11-8. The plants are from 1 foot to 12 feet in height, and the Deputy Conservator has been directed to fill the plantation during the present monsoon with as many seedlings of kinds as he can put into it, for I have no doubt but that this plantation, or any other raised near a large town, must pay.

DHARWAR.

65. Altogether planting operations have been carried out in four plantations, namely Sulkincope, Gongreecope, Hultikottee, and Eechunhully, but the results have not been satisfactory. I may add, that there having been a lack of supervision, they have been extremely unsatisfactory.

This is not as it should have been considering that there were Rs. 4,000 available for this purpose. I can only lament that we have not got it this year to spend.

I take the particulars of each plantation from the statement now before me, compiled from the form forwarded the Assistant Conservators from this office.

Sulkincope.

66. Commenced 13th September 1868. From this date to the close of 1869-70 Rs. 521-13-2 were expended and 500 jack, 128 teak, and 805 apta trees were put down. During 1870-71 Rs. 358-8-0 were expended, and 2,030 apta, &c., and 1,050 divi-divi trees put down, making a total cost of Rs. 980-5-2, with a result of 4,513 seedlings in all put down, of which 4,335 are now growing.

These are not very satisfactory results for two years. Nevertheless this plantation, which is of good area, and within 4 miles of Dharwar, is capable of being transformed into a very fine one. What plants there are are progressing well, and this year between 10,000 and 12,000 will be added. I visited this plantation three or four times since taking charge, and have given full directions for its future extension.

Gongreccore.

67. This plantation of babool was commenced on the 18th July 1868, from which date up to the close of 1869-70 Rs. 520-3-3 were expended, and 6,300 seedlings reared. During 1870-71 Rs. 116-12-0 were expended and 8,500 seedlings reared. The total cost appears to be Rs. 636-15-8, with a result of 14,800 seedlings, of which 13,400 are now growing.

This plantation, which I visited twice since taking charge, contains about 32 acres in all, and the seeds sown and dibbled in all over it will be considerable during this season. It appears to have had hitherto but little or no care taken of it.

The soil is good, though full of hurrealli grass, the roots of which extend far down into the soil, and are exceedingly troublesome. Being situated in the black plains some three miles from Dharwar this plantation will prove both useful and paying at some future time.

Hultikote.

68. This plantation was commenced on the 1st August 1864 by Mr. Shuttleworth, and from that date up to 1869-70 Rs. 2,382-0-3 were expended, and 8,000 teak plant and 4,000 apta plant planted out. During 1870-71 Rs. 163-12-0 were expended and 900 teak with 50 apta seedlings planted out, making a total of Rs. 2,545-12-0 expended, with a result

of 12,950 seedlings, of which 9,735 are now growing. This plantation has been also neglected, and when I visited it last year I found cattle had been freely over it, and that the greater number of the plants were broken short and growing more like cabbages than any thing else. I directed the Inspector at the time to cut down all the broken plants on a level with the surface of the ground, so as to get the second growth, which will be found to grow up straight and robust.

Eechunhully.

69. This plantation was commenced on the 1st June 1869, and from that time to the close of the year 1869-70 about 40,627 babool seedlings were reared at a cost of Rs. 176-3-0. During 1870-71 a further number of 2,685 were raised at a cost of Rs. 131-10-4, so that the total number of seedlings raised was 43,312, and the expenditure on account of them amounted to Rs. 307-13-4, which was extremely moderate. Unfortunately, however, there are but 10,304 seedlings, of with very few exceptions over a few inches high, now growing.

Neglect and the poorness of the soil was the cause of the great mortality.

I visited this plantation also during my tour.

BELGAUM.

Maskinhuttee.

70. This is the only teak plantation in this Collectorate, and, from the statement of the Assistant Conservator of Forests before me, the following shows the expenditure and results commenced on the 7th June 1864, from which date up to the close of 1869-70 Rs. 2,223-4-0 were expended and 40,000 seedlings planted out. During 1870-71 nothing was done beyond the expenditure of Rs. 11-7-6 on account of a fence. There are now but 20,000 growing, having an average height of from 5 to 12 feet.

I visited this plantation last year in company with Dr. Brandis and Mr. Shuttleworth, and found that cattle and fire had the free entry of it. In fact it appeared to me to be quite neglected if not quite abandoned.

Mr. Hilliard states that the cause of its present appearance was in consequence of Mr. Dalzell, the late Conservator of Forests, having stopped all expenditure on it. An effort will be made to replant by sowing next year.

71. In the Chickodee Talooka there appears to be 11 plantations of babool, commenced from June 1867, on which Rs. 296-0-0 have been expended, and 10,615 seedlings reared. Of these there are now 3,555 seedlings growing, of height varying from 6 inches to 10 feet. No expenditure appears to have been incurred during 1870-71.

72. In the Huthanee Talooka there are seven babool plantations apparently begun between 1867 and 1869, on which Rs. 1,017-12-8 have been expended, and 27,061 seedlings reared. Of these there are 17,381 seedlings now growing, of height varying from 1 to 2 feet. No expenditure appears to have been incurred during 1870-71.

STATEMENT

COMPARATIVE STATEMENT of RECEIPTS *and* EXPENDI-

COLLECTORATES.	RECEIPTS.						EXPENDI					
							Establishment.					
	1869-70			1870-71.			1869-70.			1870-71.		
	Rs.	a.	p	Rs.	a	p.	Rs.	a.	p.	Rs.	a.	p.
Surat	95,694	8	0	55,322	10	6	15,438	11	8	14,045	0	0
Khandeish	56,153	8	6	57,865	13	5	11,222	5	5	5,494	6	2
Ahmednuggur	4,013	13	3	26,160	11	2	869	11	2	1,314	15	0
Nassik	50,256	10	9	22,879	2	9	4,771	6	9	11,709	3	3
Rutnagherry	4,154	11	8	16,507	14	11	3,997	10	11	5,909	11	6
Tanna	41,725	12	10	77,528	6	8	33,298	2	0	30,420	6	9
Kolaba	88,849	9	2	60,846	14	10	18,001	15	8	14,896	4	1
Poona	74,241	8	9	76,335	9	8	19,927	0	5	21,846	4	2
Sattara	20,015	12	3	22,612	11	2	4,414	0	10	4,218	12	9
Kaira (Punch Mahals)	2,676	0	1	580	7	8	1,171	14	8	1,198	15	6
Ahmedabad	8	0	0	692	6	10	.....			152	5	4
Peint State	9,546	2	2	26,084	15	1	2,276	0	2	1,877	7	7
Sholapoor	.....			171	0	0	.....			.....		
Canara	5,03,272	6	6	4,06,406	6	5	39,849	13	9	41,687	11	5
Dharwar	46,634	15	10	53,488	1	4	10,781	0	1	8,877	4	0
Belgaum	25,255	9	7	57,496	0	5	3,330	10	5	8,338	1	0
Kulladghee	.....			1,498	4	4	.....			.....		
Total	10,22,499	1	4	9,62,477	9	2	1,69,350	7	11	1,74,986	12	6

No. I.

TURE *of the* FOREST DEPARTMENT *for the year* 1869-70 *and* 1870-71.

TURE.						Profit.	Loss.
Conservancy and Working.			TOTAL.				
1869-70.		1870-71.	1869-70.		1870-71.	1870-71.	1870 71.
Rs. a. p.		Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	
19,296 12 5		27,641 7 0	34,735 8 1		41,686 7 0	13,636 3 6	.....
26,833 4 4		10,253 1 2	38,055 9 9		15,747 7 4	42,118 6 1	.....
749 0 0		2,317 14 1	1,618 11 2		3,632 13 1	22,527 14 1	.....
10,890 2 5		2,700 5 6	15,661 9 2		14,409 8 9	8,469 10 0	.....
6,402 13 8		5,904 2 2	10,400 8 7		11,813 13 8	4,694 1 3	.....
19,016 12 0		7,186 10 6	52,314 14 0		37,607 1 3	39,921 5 5	.....
21,813 5 0		22,713 8 6	39,815 4 8		37,609 12 7	23,237 2 3	.....
14,093 11 6		12,606 9 3	34,020 11 11		37,452 13 5	38,882 12 3	.....
7,308 13 8		6,330 0 3	11,722 14 6		10,548 13 0	12,063 14 2	.....
.....		.....	1,171 14 8		1,198 15 6	.....	618 7 10
494 6 6		42 14 0	494 6 6		195 3 4	497 3 6	.....
461 0 0		1,537 14 9	2,737 0 2		3,415 6 4	22,669 8 9	.....
.....		38 10 0	.....		38 10 0	132 6 0	.....
98,195 7 4		1,27,439 14 11	1,38,045 5 1		1,69,127 10 4	2,37,278 12 1	.....
17,756 3 8		31,059 8 7	28,537 3 9		39,936 12 7	13,551 4 9	.....
3,127 8 10		12,195 3 4	6,458 3 3		20,533 4 4	36,962 12 1	.....
.....		177 15 0	.....		177 15 0	1,320 5 4	.....
2,46,439 5 4		2,70,145 11 0	4,15,789 13 3		1,45,132 7 6	5,17,963 9 6	618 7 10
					Deduct Loss.....	618 7 10	
					Balance in favour of Government...	5,17,345 1 8	

STATEMENT No. II.

STATEMENT exhibiting increase and decrease of the Value of Stock on hand at the end of the year 1870-71, *compared with that at the beginning of the same year.*

No	Collectorates.	Value of Stock on hand on the 1st April 1870.	Value of Stock on hand on the 31st March 1871.	Increase	Decrease.	Remarks.
		Rs a p.	Rs. a p.	Rs. a p	Rs. a p.	
1	Surat	916 0 0	. .	... ..	916 0 0	
2	Khandeish	3,997 0 0	3,697 0 0	.....	300 0 0	
3	Ahmednuggur	231 0 0	. .. . . .	...	231 0 0	
4	Nassick	8,454 0 0	6,310 0 0	.	2,144 0 0	
5	Rutnagherry	14,183 0 0	1,170 0 0	.. .	13,013 0 0	
6	Tanna	518 0 0	1,156 0 0	638 0 0	.. .. ..	
7	Colaba	41,000 0 0	22,277 0 0	. ...	18,723 0 0	
8	Poona	430 0 0	.. ..	.. ..	430 0 0	
9	Sattara	6,609 0 0	7,977 0 0	1,368 0 0	... ..	
10	Kaira (Punch Mahals)	13,962 0 0	13,782 0 0	.. . .	180 0 0	
11	Peint States	22,827 0 0	4,604 0 0	.. ..	18,223 0 0	
12	Canara	90,935 0 0	2,57,974 0 0	1,67,039 0 0	. . ..	
13	Dharwar	18,760 0 0	27,642 0 0	8,882 0 0	.. . ..	
14	Belgaum	19,179 0 0	.. . .	... .	19,179 0 0	
15	Kulladghee	. .	. .. .	.. . ..	.....	
	Total .	2,42,001 0 0	3,46,589 0 0	1,77,927 0 0	73,339 0 0	

STATEMENT No. III.

STATEMENT

STOCK ACCOUNT of Quantities and Value of Timber and
year 1870-71, *with Receipts and*

Collectorates.	Class of Material.	Stock on hand on the 1st April 1870.					
		Measurement.					Estimated Value.
		Number.	Candies.	Quarters.	Gus.	Feet.	
							Rs.
Sattara	Teak rafters	11,374	.....	...	...	...	1,172
	Do. wood pieces	4,463	.....	...	...	...	237
	Junglewood	1,245	.....	...	...	...	13
	Firewood	.....	580	...	...	...	5,187
Poona	Teak rafters	537	.....	...	...	...	270
	Junglewood	456	.....	...	...	...	130
	Firewood	.....	24	...	...	...	30
	Jamboolwood	.....	.....	...	...	...	.....
Rutnagherry	Teak rafters	10,379	.....	...	...	...	14,148
	Do. sotahs	991	.....	...	...	...	
	Do. stumps	3,327	.....	...	...	...	
	Do. wood pieces	24	.....	...	...	...	
	Junglewood do.	.....	.....	...	...	...	.....
	Firewood heaps	1,380	.....	...	...	...	35
				Mds			
Tanna	Teakwood	37	7	2	...	...	55
	Junglewood	138	292	15	...	...	282
	Teak rafters	442	.....	...	...	...	140
	Junglewood rafters	374	.....	...	...	...	41
Colaba	Teak rafters	83,691	.....	...	...	...	41,000
	Firewood heaps	1,506	.....	...	...	...	
Surat	Teakwood	24	42	...	...	...	602
	Do. curves	.....	.....	...	...	...	.....
	Blackwood	14	18	...	...	...	314
Ahmednuggur	Teak rafters	.....	.....	...	...	...	.....
	Firewood	.....	.....	...	...	...	.....
	Junglewood rafters	2,185	.....	...	...	...	231
Nassick	Teak wood	300	.....	...	...	...	1,800
	Do. rafters	* 15,669	.....	...	...	...	6,654
	Junglewood rafters	.....	.....	...	...	...	.....
	Firewood	.....	.....	...	...	...	.....

* 300 Rafters were not entered in the last year's balance through mistake, which are now included.

Received during the year 1870-71.					
Measurement.					Estimated Value.
Number.	Candies.	Quarters.	Guz.	Feet.	
					Rs.
.....	.....	...	...	...	.....
98,940	.....	...	...	...	10,903
11,107	.....	...	...	...	1,300
.....	1,079	...	...	...	3,848
1,26,842	.....	...	...	...	38,000
2,066	.....	...	...	...	600
.....	3,558	...	...	...	11,000
.....	.....	...	...	...	.....
2,350	.....	...	...	...	3,301
61	.....	...	...	...	
88	.....	...	...	...	
.....	.....	...	...	...	
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
		Mds.			
714	14	13	...	...	662
1,875	1,038	6	...	...	2,720
4,334	.....	...	...	...	1,654
892	.....	...	...	...	288
25,333	.....	...	...	...	11,778
75	.....	...	...	...	
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
57,790	.....	...	...	...	20,344
.....	41	...	...	...	165
6,129	.....	...	...	...	2,261
.....	.....	...	...	...	.....
29,650	.....	...	...	...	15,168
322	.....	...	...	...	10
.....	.....	...	...	...	.....

Total.					
Measurement.					Estimated Value.
Number.	Candies.	Quarters.	Guz.	Feet.	
					Rs.
11,374	.....	...	...	...	1,172
1,03,403	.....	...	...	...	12,140
12,352	.....	...	...	...	1,313
.....	1,659	...	...	...	9,025
1,27,379	.....	...	...	...	38,270
2,522	.....	...	...	...	730
.....	3,582	...	...	...	11,030
.....	.....	...	...	...	.....
12,747	.....	...	...	...	} 17,449
1,052	.....	...	...	...	
3,415	.....	...	...	...	
24	.....	...	...	...	
.....	.....	...	...	...	.....
1,380	.....	...	...	...	35
751	21	15	...	...	717
2,013	1,331	1	...	...	3,002
4,776	.....	...	...	...	1,794
1,266	.....	...	...	...	329
1,09,024	.....	...	...	...	} 52,778
1,581	.....	...	...	...	
24	42	...	...	...	602
.....	.....	...	...	...	.....
14	18	...	...	...	314
57,790	.....	...	...	...	20,344
.....	41	...	...	...	165
8,314	.....	...	...	...	2,492
300	.....	...	...	...	1,800
45,319	.....	...	...	...	21,822
322	.....	...	...	...	10
.....	.....	...	...	...	.....

No. 111.

other Produce on hand at the commencement and the close of the Issues during the year.

Sold during the year.						Stock on hand on the 31st March 1871.						
Measurement.					Actual amount realized by sale.	Measurement.					Estimated Value.	Total.
Number.	Candies.	Quarter.	Guz.	Feet.		Number.	Candies.	Quarters.	Guz.	Feet.		
					Rs. a. p						Rs.	Rs.
11,374	.....	...	...	...	11,984 9 6	.....	.....	...	...	...	.....	
84,437	.....	...	...	...		18,966	.....	...	...	...	3,614	
10,653	.....	...	...	...	1,382 15 0	1,699	.....	...	...	...	562	
.....	1,087	...	...	...	5,038 10 0	.....	572	...	...	...	3,801	
												7,977
1,27,379	.....	...	...	...	37,036 6 0	.....	.....	...	...	...	.....	
2,522	.....	...	...	...	767 8 10	.....	.....	...	...	...	.....	
.....	3 582	...	...	...	14,126 13 0	.....	.....	...	...	...	.....	
.....	.....	...	...	...	.....	.....	.....	...	...	...	.....	
												.....
9,176	.....	...	...	...		3,571	.....	...	...	...		
557	.....	...	...	...	8,978 9 6	495	.....	...	...	...	1,170	
1,542	.....	...	...	...		1,873	.....	...	...	...		
24	.....	...	...	...		.....	.....	...	...	...		
.....	.....	...	...	...	.....	.....	.....	...	...	...	.....	
1,380	.....	...	...	...	29 14 0	.....	.....	...	...	...	.....	
												1,170
561	20	10	...	...	617 7 8	190	1	5	...	...	99	
1,896	1,090	15	...	...	2,754 1 2	117	240	6	...	...	248	
2,632	.....	...	...	...	1,142 2 11	2,144	.....	...	...	...	653	
331	.....	...	...	...	171 14 3	935	.....	...	...	...	156	
												1,156
71,661	.....	...	...	...	* 23,606 12 5	37,365	.....	...	...	...	22,277	
1,060	.....	...	...	...		521	.....	...	...	...		
												22,277
24	42	...	...	...	919 3 4	.....	.....	...	...	...	.....	
.....	.....	...	...	...	.....	.....	.....	...	...	...	.....	
14	18	...	...	...	313 15 7	.....	.....	...	...	...	.....	
												.....
57,790	.....	...	...	...		.....	.....	...	...	...	.....	
.....	41	...	...	...	23,000 6 6	.....	.....	...	...	...	.....	
8,314	.....	...	...	...		.....	.....	...	...		.....	
												.....
.....	.....	...	...	...	.....	300	.....	...	...	...	1,800	
36,034	.....	...	...	...	17,312 0 0	9,285	.....	...	...	...	4,510	
322	.....	...	...	...	9 15 0	.....	.....	...	...	...	.....	
.....	.....	...	...	...	.....	.....	.....	...	...	...	.....	
												6,310

* There is a difference of Rs 6,894-3-7, owing to the price realized for the material on hand at the commencement of the year being Rs. 6,894-3-7 less than the valuation that had been fixed upon it.

STATEMENT

Collectorates.	Class of Material	Stock on hand on the 1st April 1870.					
		Measurement.					Estimated Value.
		Number	Candies.	Quarters.	Guz.	Feet.	
							Rs.
Peint State	Teakwood	889	.....	...	...	...	3,548
	Teak rafters	33,062	.....	...	...	...	17,223
	Junglewood rafters	77	.....	...	...	...	14
	Teak trees	6,533	.....	...	...	...	2,042
Kaira (Punch Mahals)	Timber	69,437	.....	...	...	...	* 13,962
Khandeish	Teak rafters	17,320	.....	...	52	2	3,997
Canara	Teakwood	2,388	3,377	1	1	7	56,905
	Blackwood	943	800	2	...	13	8,058
	Junglewood	1,747	1,869	1	1	11	23,605
	Rafters	107	71	3	2	4	535
	Slabs	.....	.....	...	...	...	.....
	Teakwood, inferior	.....	.....	...	...	...	.....
	Junglewood do.	.....	.....	...	...	...	.....
	Bamboos	1,160	.....	...	...	...	66
		In. Mds.					
	Firewood	9	.....	...	...	...	2
		Tons.	Candies.	Mds.			
	Do.	72	2	5	...	...	504
		Tons.	Feet.	Inchs.			
	Do.	210	39	3	...	...	1,760
	Charcoal	.....	.....	...	...	...	.....
	Sandalwood	.....	.....	...	...	...	.....
Dharwar	Teak rafters	1,848	.....	...	...	...	3,725
	Do. sotahs	162	.....	...	...	...	1,352
	Junglewood rafters	.....	.....	...	...	...	.....
	Do. sotahs	.....	.....	...	...	...	.....
	Firewood	.....	3,252	...	...	...	12,153
		Pharas.					
	Charcoal	750	.....	...	...	...	1,500
	Bamboos	600	.....	...	...	...	30
Belgaum	Teakwood, Blackwood, Junglewood rafters and Deadwood	40,664	.....	...	...	...	19,179
Kullادgee	.....	.....	.....	...	...	...	.....

* Erroneously entered at Rs. 7,000 in last year's accounts.

Received during the year 1870-71.

Measurement					Estimated Value.
Number.	Candies.	Quarters.	Guz.	Feet.	
					Rs.
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
.....	.....	...	...	...	.....
13,254	14,922	2	4	12	2,71,330
552	503	3	2	19	7,120
7,325	8,450	...	4	19	1,15,145
1,803	498	1	2	3	18,030
32	19	2	1	11	288
788	91	1	4	15	1,576
100	.....	...	...	...	200
.....	.....	...	...	...	.....
In Mds.					
2,614	.....	...	...	...	615
Tons	Candies	Mds.			
544	2	...	...	...	3,710
Tons.	Feet				
533	50	...	...	...	4,264
Coombs	Moorahs.				
58	10	...	...	...	877
Candies.	Maunds.	lbs	tolas		
2	13	20	4	...	215
9,995	.....	...	...	...	13,205
87	.....	...	...	...	734
1,266	.....	...	...	...	1,608
2,040	.....	...	...	...	5,259
.....	10,786	...	...	...	42,308
1,271	.....	...	...	...	2,082
.....	.....	...	...	...	.....
1,461	616	1	1	14	5,187
579	371	2	1	2	2,691
906	703	3	...	18	3,832
.....	.....	...	...	...	.....

STATEMENT No. IV.

STATEMENT exhibiting the Expenditure incurred on account of Timber and other Forest Produce received into Stock during the year 1870-71.

No.	Collectorates.	Amount.			Remarks.
		Rs.	a.	p.	
1	Surat	.....			
2	Khandeish.....	512	15	0	
3	Ahmednuggur	1,717	6	8	
4	Nassick	1,544	15	2	
5	Rutnagherry	3,085	8	2	
6	Tanna.....	4,834	4	9	
7	Colaba	16,046	9	7	
8	Poona.....	7,901	11	3	
9	Sattara	5,414	11	0	
10	Peint States.....	1,537	14	9	
11	Canara	1,00,621	12	9	
12	Belgaum.....	9,670	5	4	
13	Dharwar.....	28,998	15	0	
14	Kulladghee	.....			
	Total.....Rs.	1,81,887	1	5	

STATEMENT No. V.

STATEMENT showing the unproductive expenditure on Plantations, Forest Roads, rewards for planting Trees, Dead Stock Articles, &c., incurred during the year 1870-71.

No.	Collectorates.	Amount			Remarks.
		Rs.	a.	p.	
1	Surat	20,325	10	7	
2	Khandeish	1,881	15	10	
3	Ahmednuggur	600	7	5	
4	Nassick	452	11	5	
5	Rutnagherry	4,224	10	0	
6	Tanna	1,847	10	1	
7	Colaba	542	10	0	
8	Poona	784	1	0	
9	Sattara	848	10	3	
10	Peint States	.....			
11	Canara	23,924	13	0	
12	Dharwar	1,185	6	4	
13	Belgaum	121	10	10	
14	Kulladghee	.....			
	Total.....Rs.	56,740	4	9	

STATEMENT No. VI.

ABSTRACT showing the amount realized on account of Timber and Forest Produce Sales during the year 1870-71, *and on account of outstandings of previous years, with outstandings on the* 1st *April* 1871.

No.	Collectorate.	Realizations of Timber and Forest Produce Sales during the year 1870-71.	Realizations on account of outstanding of previous years.	Total of Columns 3 and 4.	Outstandings on the 1st April 1871.	Total of Columns 5 and 6.	Remarks.
1	2	3	4	5	6	7	8
		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1	Surat	1,233 2 11	.....	1,233 2 11	.....	1,233 2 11	
2	Khandeish	2,538 6 6	.....	2,538 6 6	.....	2,538 6 6	
3	Ahmednuggur	25,930 1 2	230 10 0	26,160 11 2	.....	26,160 11 2	
4	Nassick	22,879 2 9	.....	22,879 2 9	4,205 0 0	27,084 2 9	
5	Rutnagherry	9,462 10 0	.....	9,462 10 0	.....	9,462 10 0	
6	Tanna	64,653 13 8	.....	64,653 13 8	40,567 6 10	1,05,221 4 6	
7	Colaba	44,715 10 4	.....	44,715 10 4	.....	44,715 10 4	
8	Poona	72,351 10 8	3,983 15 0	76,335 9 8	5,242 8 0	81,578 1 8	
9	Sattara	22,509 5 3	.....	22,509 5 3	.....	22,509 5 3	
10	Kaira (Punch Mahals)	511 1 7	.....	511 1 7	.....	511 1 7	
11	Ahmedabad	563 10 10	.....	563 10 10	.....	563 10 10	
12	Peint States	26,084 15 1	.....	26,084 15 1	505 13 0	26,590 12 1	
13	Canara	2,95,412 5 7	1,10,994 0 10	4,06,406 6 5	1,13,721 7 0	5,20,127 13 5	
14	Dharwar	52,327 12 4	1,160 5 0	53,488 1 4	3,813 4 10	57,301 6 2	
15	Belgaum	52,970 4 5	4,525 12 0	57,496 0 5	6,857 0 0	64,353 0 5	
16	Kulladghee	1,498 4 4	.....	1,498 4 4	.....	1,498 4 4	
	Total.....Rs.	6,95,642 5 5	1,20,894 10 10	8,16,537 0 3	1,74,912 7 8	9,91,449 7 11	

STATEMENT No. VII.

STATEMENT exhibiting the amouut of outstanding advances against Contractors, &c., at the commencement of the year 1870-71, *the recoveries in cash and work done, and the balances outstanding at the end of the same year.*

Collectorates.	Advances.			Recoveries			Balance outstanding at the close of the year 1870-71.	Remarks.
	Amount of advances against Contractors, &c., at the commencement of the year 1870-71.	Amount of advances during the year 1870-71.	Total.	In Cash.	In Work.	Total.		
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	
Surat	1,000 0 0	.....	1,000 0 0	.....	.....	.....	1,000 0 0	
Canara	60,671 4 0	28,757 2 0	89,428 6 0	2,384 4 2	61,508 5 5	63,892 9 7	25,535 12 5	
	61,671 4 0	28,757 2 0	90,428 6 0	2,384 4 2	61,508 5 5	63,892 9 7	26,535. 12 5	

STATEMENT No. VIII.

STATEMENT showing Forest Offences, with the number of convictions and the amount of fines imposed and value of property confiscated, during the year 1870-71..

No.	Collectorates.	Cases in which conviction was obtained.	Cases in which conviction failed.	Total number of cases.	Fines imposed in cases in which conviction was obtained.			Value of property confiscated.			Remarks.
					Rs.	a.	p.	Rs.	a.	p.	
1	Surat	3	.....	3	24	0	0	12	8	0	
2	Khandeish	56	1	57	384	8	0	41	12	9	
3	Ahmednuggur	38	9	47	138	4	0	52	6	9	
4	Nassick	8	.....	8	15	4	0	2	10	0	
5	Rutnagherry	68	2	70	290	8	0	333	3	10	
6	Tanna	124	52	176	1,445	8	0	1,202	2	10	
7	Colaba	54	23	77	1,038	0	0	159	10	6	
8	Poona	92	57	149	389	8	0	96	3	9	
9	Sattara	43	29	72	124	0	0	32	8	10	
10	Kaira (Punch Mahals)	18	1	19	82	0	0	17	12	9	
11	Peint States	8	.....	8	15	4	0	2	10	0	
12	Canara	70	13	83	952	0	0	.....			
13	Dharwar	26	.....	26	370	0	0	.....			
14	Belgaum	34	18	52	342	0	0	314	6	3	
15	Kulladghee	.....	.....	.....	.....			.....			
	Total	642	205	847	5,610	12	0	2,268	0	3	

No. IX.

STATEMENT exhibiting the values of Wood given gratis in the several Collectorates of the Bombay Presidency during the year 1870-71.

No	Collectorates	Value.			Remarks
		Rs	a	p	
1	Surat . .	906	8	0	
2	Khandesh . .	1,352	11	2	
3	Nassik	605	1	3	
4	Rutnagheiry				
5	Tanna . . .	1,375	2	10	
6	Colaba . .	5,655	1	0	
7	Poona	368	0	0	
8	Sattara	157	10	0	
9	Petit States .	435	11	3	
10	Kaira (Punch Mahals) . .	4,622	0	0	
11	Canara .. .	4,320	6	7	
12	Dharwar	11	0	0	
13	Belgaum . . .	90	12	0	
14	Kulladghee	50	0	0	
	Total Rs.	19,980	3	1	

Forests.

No. 5195.

REVENUE DEPARTMENT.

Bombay Castle, 17th October 1871.

Letter from the Conservator of Forests, N.D., No. 1572, dated 28th August 1871—Submitting his Annual Administration Report of the Forests of the Northern Division for the year 1870-71.

RESOLUTION.—During the year under report the revised system of Forest Administration was inaugurated, and two separate reports from the Conservators of the Northern and Southern Divisions have now to be reviewed.

2. The gross revenue amounted to Rs. 9,62,476, and the expenditure to Rs. 4,45,131, leaving a sum of Rs. 5,17,345 to represent the net Forest Revenue of the entire Presidency, exclusive of Sind. The value of the stock in hand amounted to Rs. 3,46,589, and the amount of outstandings to Rs. 1,74,911.

9,62,476
4,45,131
———
5,17,345

In the preceding year the gross revenue amounted to Rs. 10,23,433, and the expenditure to Rs. 4,15,477, leaving Rs. 6,09,955 as the net proceeds. There is a falling off, therefore, this year in the net receipts of Rs. 92,610. On the other hand, the value of wood in stock at the close of 1869-70 was only Rs. 2,29,271, and the outstanding amounted to Rs. 2,15,005. The following contrasted statement shows the actual difference between the two years :—

		1869-70.	1870-71.
Net revenue	Rs.	6,09,955	5,17,345
Value of stock in hand	,,	2,29,271	3,46,589
Outstandings.....	,,	2,15,005	1,74,911
	Rs.	10,54,231	10,38,845

10,54,231
10,38,845
———
15,386

The actual decrease is, therefore, inconsiderable.

3. The financial results of the two years for each of the Collectorates in the Presidency contrast as follows:—

		1869-70.			1870-71.		
		Receipts.	Expenditure.	Net Revenue.	Receipts.	Expenditure.	Net Revenue.
Northern Division.	1. Poona	74,241	34,020	40,221	76,335	37,453	38,882
	2. Sattara	20,015	11,723	8,292	22,612	10,549	12,063
	3. Ahmednuggur	4,014	1,618	2,396	26,160	3,633	22,527
	4. Khandeish	56,153	38,055	18,098	57,865	15,747	42,118
	5. Surat	*95,094	34,735	60,359	55,322	41,686	13,636
	6. Ratnagherry	4,154	†10,400	....	16,508	11,814	4,694
	7. Colaba	88,849	39,815	49,034	60,847	37,610	23,237
	8. Kaira (Panch Mahals)	2,676	1,172	1,504	580	†1,198	....
	9. Tanna	41,725	†52,315	....	77,528	37,607	39,921
	10. Ahmedabad	8	†494	....	692	195	497
	11. Sholapoor	.....	....	....	171	39	132
	12. Nassick	50,256	15,661	34,595	22,879	14,410	8,469
	13. Point States	9,546	2,737	6,809	26,084	3,415	22,669
Southern Division.	14. Canara	5,03,272	1,38,045	3,65,227	4,06,406	1,69,127	2,37,279
	15. Dharwar	46,635	28,537	18,098	53,488	39,937	13,551
	16. Belgaum	25,255	6,458	18,797	57,496	20,533	36,963
	17. Kulladghee	.....	....	....	1,498	178	1,320
				6,24,030			5,17,958
				†17,322			†618
	Total	10,22,493	4,15,785	6,06,708	9,62,471	4,45,131	5,17,340

* Including Rs. 5,000 on account of Broach.

† Deduct loss.

4. The chief falling off has been in Canara. Major Peyton attributes this partly to the general depressed state of trade, but principally to the destructive stump fee system in the adjacent province of Mysore, where apparently any one is allowed to fell, without restriction of any kind, a cart-load of squared timber on payment of a fee varying from Rs. 7 to Rs. 9.

The falling off in the demand for timber is evidenced by the fact that the value of the quantity in stock at the end of the year is set down at Rs. 2,57,974, whereas at the end of the preceding year there was only Rs. 90,935 worth in hand. A communication on the subject of the fee system has been made to the Chief Commissioner, Mysore, who is fully alive to the evil, and is taking steps to put a stop to it.

The apparent decrease in Surat is owing to a sum of Rs. 67,000 not having been paid into the treasury till after the 31st March 1871, and the difference in Nassick is owing to the Akola Talooka having been transferred to Nuggur.

5. On the whole, therefore, His Excellency the Governor in Council has no reason to be otherwise than satisfied with the financial position of the Department.

6. Working operations have been carried on and supervised with vigour and judgment. The only exception to the system of Departmental cuttings seems to have been in the case of the Haveillee Talooka of the Poona Collectorate, where the right to cut jungle rafters per hundred and common firewood per candy was sold by auction. Explanation as to why such a practice was allowed is to be submitted.

His Excellency in Council cannot but feel doubtful of the advisability of continuing the dead-wood contract system in Tanna. Unless the contractor's operations are most closely supervised, there is nothing to prevent his committing very serious depredations on the forests. If it pays the contractor to remove this wood, the Department ought, under proper management, to be able to do so also at a profit. The Conservator, N.D., is requested to pay particular attention to this point.

In Canara the establishment of a steam saw-mill will no doubt effect much economy; but until it is seen how the machinery recently ordered out from England answers, it will not be advisable to incur any further expenditure in this direction.

7. Much attention has been paid to plantations in most of the Collectorates. The description of the teak plantations in Canara is particularly interesting, and the attention of all forest officers is to be directed to the plan of rearing teak seedlings described by Major Peyton in paragraphs 47 to 56 of his report.

In the Nassick Collectorate little appears to have been done in the way of plantations; and in the Rutnagherry, Kulladghee, Sholapoor, and most of the Guzerat Collectorates, the work has yet to be commenced. His Excellency the Governor in Council must again impress upon all Collectors and Forest Officers the great

necessity there is for establishing fuel plantations in the vicinity of large towns. It should be the object of the Forest Department to utilize in this way every available piece of ground, and they should consider it part of their duty to sow and plant with babool, bamboo, or other useful trees, the sides of all roads and cart tracks. The work of planting road-side trees of a kind which require fencing and watering can best be done by the Revenue Department through the agency of the village officers; but it should be the special business of the Forest Department to look after other descriptions which do not require special tending.

8. The depôt system has not worked satisfactorily, and it has been decided to abandon it in the Sattara Collectorate. It might perhaps with advantage be given up at Hooblee and Dharwar. Periodical sales by auction of a sufficient quantity of both timber and firewood to meet the wants of the neighbourhood might be made by the Department, as was done with such marked success at Kulghut. gee, and the retail trade left entirely in the hands of private dealers. These sales might be held at certain central places periodically in each Collectorate.

9. In the Dharwar Collectorate, the circumstance of the Government forests being so interlaced with those belonging to inam villages renders the work of preservation unusually difficult. It would be well, if possible, to obtain possession of these inam forests either by exchange or purchase, and Government are sure that Mr. E. P. Robertson, who has evinced such a marked interest in, and such a hearty co-operation with, the work of the Forest Department, will give this difficult question his best attention.

10. The work of demarcation has not progressed with that degree of system which Government expected. Much has no doubt been done, but it has hitherto been carried on in a somewhat desultory manner. What is wanted is to complete the demarcation once for all in certain particular localities; aud attention should be given to one particular talook, or even a lesser area, each season, rather than to an entire district.

In the Canara District there are special difficulties attending the work. There, instead of reserving forests from the area under cultivation, the reverse operation will probably have to be carried out,

and it will most likely be necessary to consider the whole country as forest, except such portions as have been demarcated for cultivation. The Collector of Canara, Mr. Shaw Stewart, whose long experience and great interest in all forest matters entitle his opinion to much weight, will, in communication with the Survey Commissioner and Conservator, be able to advise Government as to the best course to be pursued.

11. Free grants of wood and bamboos to the value in all of Rs. 20,106 have been made. The Conservator, N.D., considers it mistaken liberality to make these grants; but he should bear in mind that the people to whom they have been made are entitled to much consideration at the hands of his Department; and that it is the best policy to enlist their good offices and wishes as much as possible in favour of his department. He will be of course right to watch the exercise of the privilege, and bring to notice any instances of its abuse that may come to his knowledge.

In all 847 forest offences have been committed, 642 convictions obtained, fines to the amount of Rs. 5,610 inflicted, and wood to the value of Rs. 2,267 sold.

The Right Honourable the Governor in Council has much pleasure in recording his entire approbation of the zealous and successful manner in which the two Conservators, Mr. Shuttleworth and Major Peyton, have conducted the duties of their respective Divisions. Amongst the officers entitled to special commendation are Messrs. Barrett, Müller, and Wallinger.

F. S. CHAPMAN,
Chief Secretary to Government.

To

The Conservator of Forests, N. D.
The Conservator of Forests, S. D.
The Revenue Commissioner, N. D.
The Revenue Commissioner, S. D.
The Survey and Settlement Commissioner, N. D.
The Survey and Settlement Commissioner, S. D.
All Collectors and the First Assistant Collectors, in charge Punch Mahals.

No. 177 of 1871.

Revenue Department.

From the CONSERVATOR of FORESTS in SIND,

To the COMMISSIONER in SIND,

Kurrachee.

Conservator's Office:

Camp Kurrachee, 16th May 1871.

Sir,—I have the honour to lay before you the Annual Forest Administration Report for the year 1870-71 and ending on the 31st of March last. It will be seen, from the Comparative Statement **A**, that the gross income of the year stands at Rs. 2,01,356-5-6 against Rs. 2,40,882-11-2 for the preceding year, being a decrease of Rs. 39,526-5-8. The falling off is mainly due to the two heads, viz. first, building wood, to the extent of Rs. 14,700; secondly, firewood, which shows a decrease in the receipts amounting to Rs. 24,079. As regards the less sales of the former item, building wood, they can only be accounted for by the long continued depressed state of trade which affects every department alike, and it is feared, that for some time to come, there is but little chance of things improving. There has been no supply of baubool wood made to the Gun Carriage Department in Bombay, neither have we up to date found a market for the stock of "baubool" sleepers still stored at Kotree, save 1,000 to the Superintendent Harbour Works, Kurrachee. The Indus Valley State Railway will, it is believed, now soon be under construction, and this great work will doubtless give a stimulus to the trade we have been long anticipating.

2. The deficit in the item of firewood is much to be regretted. The Department had, as you are aware, under instructions reduced the rates of supply from Rs. 18-8-0 to Rs. 16 per hundred maunds from the 1st of July last. This reduced charge applied to the Steam Flotillas and other vessels working on the Indus, and also

to wood sold at the Depôt at Kotree. There has been a loss in this difference of rate charged for the above months of Rs. 12,082 on steam fuel alone, which is a very considerable item; and it tells much against the special financial results of the year under review. With the price of wood lowered, it was reasonable to suppose with other pre-existing conditions remaining unchanged, that our sales would have increased, instead of falling off to the abnormal extent of 75,400 maunds; 27,550 maunds of this less amount of supply being due to the head of steam fuel, and the remainder 47,856 to that of private sales in the forests, inclusive of the Depôt at Kotree.

3. During the twelve months there has been sold at the above mentioned Depôt 19,972 maunds of firewood by private sale, the whole realisations on that head being Rs. 3,541, or at the rate of Rs. 17-11-0 per hundred maunds, the excess, viz. Rs. 1-11-0 over and above the late revised rate—Rs. 16—being the mean or average price between the old and the new rates, that is, for the period of three months wood sold at Rs. 20 and for the terminating nine months at Rs. 16 per hundred maunds.

4. Auction sales of firewood and other forest produce have during the year been held both at the "Giddoo" and "Kotree" Bunders, at the former place we have disposed of 1,450 maunds of "baubool" and kundee fuel, the prices actually realised being Rs. 12-8-0 per hundred maunds; at the Depôt of Kotree 1,800 maunds were sold at very nearly similar rates, vide Statements appended.

5. Some 3,980 "Bhan" rafters with 756 "baubool beams have also been auctioned at the Depôt at various times, the former were sold at Rs. 2-8-0 per hundred, and the latter at annas 7 pies 11 per log, or about two annas per cubic foot. These auction sales, I regret to state, are the reverse of satisfactory, they should however be viewed only as experimental or tentative, although taking the said sales as a market test of the supply and demand of firewood, the only conclusion to be arrived at is, either, that the stores of the petty traders are over-stocked, or that working only on a limited capital, they prefer their hand to mouth system of dealing to one of a wider and more comprehensive mercantile character.

6. It must also be explained, that the Forest Department do not command the entire monopoly of the firewood supply, either at Hydrabad or Kurrachee; at the former town in a less degree than at the latter. Inferior jungle wood is brought into the "bazaars" by camel men and others, which is sold at the houses of the people at comparatively easy rates, this material, though very inferior in a burning point of view to forest "baubool," meets adequately the wants of the poorer population, with the additional advantage of ready delivery at their own doors.

7. As regards the private sales of firewood at the Kotree Depôt, these may be viewed perhaps as satisfactory and encouraging; but I would earnestly solicit, that, in this important matter, the Department charge instead of Rs. 16 per hundred not less than the original fixed rate, viz. about Rs. 20 per hundred maunds, vide figures detailed as per margin. It will be seen that the Royalty has been put down at Rs. 7-13-0, and the reason for this increase is, that it may be made to correspond with the fees levied at the "Meanee" and adjoining forests, which have continued at 1¼ annas per maund, on all small traders thence obtaining fuel for the Hydrabad and other markets.

Cutting	Rs.	6	0	0
Boating	,,	5	4	0
Establishment..	,,	1	0	0
Average loss ...	,,	0	8	0
Royalty.....	,,	7	13	0
Total	Rs.	20	9	0

8. The Royalty charge must be viewed as the most important fiscal element in the whole administration, and is based on the hypothesis, that land on which wood is produced should bear due relation to what that land would realise under cereal cultivation. The appended Statement **B** shows the general average revenue derived per annum for each separate acre as annas 9 pies 2, a falling off from the preceding year of no less than three annas on the acre,—a very serious decrease. Taking these figures therefore in comparative sense with other assessed revenue lands, and it must I think fairly be conceded, that the Royalty charge of 1¼ annas per maund of 80 lbs. is really very moderate, and I trust that it may be accepted as the minimum one, whether the wood be sold to the petty traders frequenting the forests near the larger towns, or from the Kotree Depôt, where even at the now proposed and former rates I have every reason to believe the demand will steadily increase.

9. With regard to the Steam Flotillas, it may in the present low state of trade, and corresponding short earnings, be considered advisable not to enhance the present rates; when times mend, they can, if expedient, be again duly revised, as suggested in Government Resolution No. 3072, dated 28th June last.

10. With the two foregoing important exceptions, there has been an increase on nearly all other heads—the grazing fees show an excess of Rs. 3,347, fisheries Rs. 394, "baubool" seed Rs. 185, "lac" Rs. 635, fines Rs. 631, and "baubool" pods Rs. 309, while the decrease under cultivation must be accounted for by the restrictions placed on it. Some portion of this cultivation has been permitted for a special object, viz. with the view of irrigating old high lands that have long since lain dry and waste, and which could only be turned to account by the drawing of water over such spots by artificial means. In some localities, where the ground thus watered has, after two or three successive years, indicated that the germs of natural "baubool" reproduction were latent in the soil, we have in such cases adopted a system of hedging in, and cultivation has altogether been excluded, or only admitted under more careful supervision; the plan will probably find favour hereafter, be improved on, and be eventually extended, until some more effective means be found for reclothing these barren and otherwise unprofitable wastes.

11. The Budget estimate for the year showed Rs. 2,65,000 as the probable amount of receipts, so that the results are less by Rs. 63,644 than had been originally anticipated, but it must be explained that when the Budget for 1870-71 was framed, the reduced rates for fuel supply had not been contemplated, neither had the less comsumption, hence the falling off on this particular head to the extent before noted. It will be seen from Statement **E** that the stock on hand has been augmented, comparatively with the former year, by Rs. 20,529, this sum added to the actuals shown in Statement **A**, viz. Rs. 32,121 + 20,529, would bring up the entire profits of the year to Rs. 52,650.

12. Of "sleepers," out of the entire supply of 15,000,—12,434 have been brought to account at the lowest possible valuation, *i. e.* Rs. 2-8-0 per log. Of this amount Rs. 1-8-8 goes for expendi-

ture in conversion and delivery, while the balance 15 annas 4 pies represents the price of 3½ cubic feet of wood, or a little less than three annas per foot; this assumed rate might I think be taken even in these depressed times as the minimum worth of "baubool" timber.

13. The gross expenditure for 1870-71, minus annas and pies, amounts to Rs. 1,70,682 against Rs. 1,48,764, being an excess of Rs. 21,918 over that of the year preceding. A portion of this additional expense, viz. Rs. 4,736, may be viewed as exceptional, it being incurred on account of the special surveys of the forests on either bank of the Indus. There has also occurred another item of charge, Rs. 1,447, which may be taken as an extraordinary one, that sum having been paid as compensation for new land brought within forest limits. Then again there is the additional charge of Rs. 15,796 for salaries and travelling allowances to the three extra Assistants employed in the Province on special duty. This extra cost of Establishment was not provided for in the Budget of 1870-71, which estimated the expenditure at Rs. 1,49,645; there is a difference in excess therefore by Rs. 21,037, corresponding nearly with the figures heading this para.

14. The total annual wood yield of the forests on a gross area of 352,460 acres is given in the appended Statement **C**, as 1,490,235 cubic feet against 1,652,106 for 1869-70, being 161,870 less in supply than in that year. Again the actual yield for each individual acre of land is stated at 4·23 feet, or nearly one cubic foot less than in the former year, while the gross revenue is shown as Rs. 0-9-2 per acre, that is three annas short of 1869-70. The Oonerpoor Tuppa gives the largest out-turn per acre, and the Veeran the lowest, the former, as per Table **B**, being 11·743 cubic feet, and the latter 0·583. The Sekat and Nowshera Divisions stand highest in the monetary table, the one showing Rs. 1-5-9 per acre, and the other Rs. 1-4-1. The figured Statement **F** is merely a comparative one for the last ten years' results.

Conservancy.

15. In respect to the general state and condition of the several forests, no very marked changes—save one to be noted hereafter—have occurred during the past twelve months. The fires in the Upper Sind

"Beylas" have not, I am happy to say, been of a very serious or of an extensive nature; these, as you are aware, do an infinity of mischief, and once fairly ignited, they are practically beyond all control, a few hours being sufficient to destroy large tracts of valuable wooded land. This is an evil that Foresters have to contend with, not only in Sind, but in the "Dhoon," the "Dang," and other parts of India. In this dry Province the forests would, but for the annual fertilising, waters of the Indus, speedily disappear; it is these floods, which even under close foliage, feed and develope the tall dense reed grasses, to repress which no amount of labour or expense compatible with beneficial results would avail. Doubtless these alluvial forests are surrounded by many difficulties, elementary and physical. Such are Nature's conditions to be utilised, as changing circumstances would periodically seem to suggest.

16. The wastage or diminution of the forests by erosion is a subject that must sooner or later be seriously considered; the steady loss of area being too extensive to admit of the permanent continuation of these alluvial forests, unless some more comprehensive system be adopted than of late years has been worked on.

17. The appended sheets **I** and **J** will help to illustrate the matter, and show what important changes have been brought about since the present forests were first demarcated in 1854-55. I will briefly enumerate some of those "Beylas" whose size has much diminished even in the period of my own administration, and to replace which would now, I fear, be very difficult.

18. The "Soonder" and "Terrechanee" Forests, in the Rohree "Tuppa," are now more skeletons of what they once were; the former in 1860-61 comprised an area of "pucka" land of about 5,000 or 6,000 acres, which now stands at 216; while of the latter no better accounts can be given, there being only 211 acres of "cutcha" land remaining, as per table above referred to.

19. Again, in the "Kundiara" Division, the Samptia "Beyla," once a very large tract, has been cut down to 809 acres of "pucka" land, and even that small portion seems destined, like other forests, to be blotted out of the map.

20. In the Nowshera "Tuppa" both the "Bhortee" and "Kherodera" "Beylas" have so decreased in area in the last five or six years, that the former has now only 5,245 acres of "pucka" ground, and the latter 9,370. The extensive losses of this latter forest were alluded to in my last report, and since that time further encroachment has taken place; in fact in January last it was much feared the river would bisect the whole forest,—but it is safe now until the fall.

21. The Rana "Tuppa" has been more fortunate, and the "Marree" "Beyla" has now on its front a fine tract of "cutcha" ground, and the young baubool promises well, which is at least one bright spot in the history of our losses.

22. The "Oonerpoor" and "Sekat" "Tuppas" have since the conquest lost, to the best of my belief, fully one-half of their former area; the "Kebranee" and "Sekat" "Beylas" now only possess respectively 3·15 and 9·47 acres of "pucka" ground.

23. During the reign of the late "Ameers" the "Beylas" were continued by the taking up of any new lands, which seemed to indicate the required conditions for the formation of other "Shikargahs" or forests, and this system enabled them to retain an equilibrium as regards area. We too take up "cutcha" lands on the principle of the alluvian law, but these again are subject to such changing circumstances, owing to the river's caprice, that, to depend on that system alone, would be insufficient for the due retention of a fixed and proper amount of area; doubtless the obtaining of depressed lands, somewhat remote from the ever shifting banks of the Indus, would be an improvement on the hand to mouth policy now extant, but it must be remembered, that to secure such localities, possessing all the required conditions, for the creation and continuity of forests, would be a very difficult matter. The subject is, however, an important one, and will, I feel sure, commend itself to your best attention.

24. Three copies of the Survey Maps of each forest have been furnished by the Settlement Officers, Majors Taverner and Haig, and our best thanks are due to those gentlemen for the care and trouble bestowed on the work performed.

25. The three Officers employed on special duty, viz. Messrs. Schlich, Pengelly, and Dasai, have been actively engaged in making Valuation Surveys of the several Forests; the maps and final report on this head will be submitted by Mr. Schlich hereafter. Mr. W. Hexton still retains charge of the Upper Division, and I am glad to say, continues to do well. The services of Messrs. Hill and Wilson, Inspectors, have been retained to meet the contemplated increased amount of labour in the matter of the coming sleeper-supply for the Indus Valley Railway.

26. In conclusion, I may here mention, that a patch of ground near the Railway terminus in Kurrachee has lately been made over to the Department, with the view of forming a Wood Depôt, as soon as time and circumstances may permit the transport of material thither.

I have the honour to be, &c.,

W. A. FENNER,

Conservator of Forests in Sind.

A.

COMPARATIVE STATEMENT of Income and Expenditure in the Sind Forest Department for the year 1870-71.

Items.	1869-70.			1870-71.			Increase.			Decrease.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
Grazing Fees	32,356	14	6	35,704	5	5	3,347	6	11	.....		
Building Wood	24,959	15	4	10,258	15	7	.....			14,700	15	9
Firewood	1,47,230	3	10	1,23,151	2	5	.....			24,079	1	5
Jow	133	3	2	314	13	0	181	9	10	.....		
Charcoal	1,250	7	4	1,157	15	0	.....			92	8	4
Fisheries	3,415	0	7	3,809	6	6	394	5	11	.....		
Reeds	336	5	4	423	8	0	87	2	8	.....		
Kahs	77	6	0	26	3	6	.....			51	2	6
Grass	70	7	0	84	15	7	14	8	7	.....		
Mangoes	699	9	6	768	10	2	69	0	8	.....		
Baubool Seeds	212	10	6	398	8	8	185	14	2	.....		
Lac	40	0	0	675	0	0	635	0	0	.....		
Honey	43	0	0	48	12	0	5	12	0	.....		
Fines	1,159	5	8	1,791	1	0	631	11	4	.....		
Baubool Pods	4,877	8	2	5,186	12	0	309	3	10	.....		
Land Revenue from cultivation within Forest limits	24,020	10	3	17,556	4	8	.....			6,464	5	7
Total.....Rs.	2,40,882	11	2	2,01,356	5	6	5,851	11	11	45,388	1	7
Expenditure	1,48,764	15	8	1,70,682	2	10	.....			.....		
Money Compensation	.....			1,417	3	10	.....			.....		
Total	1,48,764	15	8	1,69,234	15	0	.....			.....		
Net Profit...Rs.	92,117	11	6	32,121	6	6	.....			.....		
Add to Profit for 1870-71 two exceptional charges as follows:—												
On account of surveying Sind Forests	8,879	9	10	4,142	10	8	.....			.....		
Salaries to Deputy and Assistant Conservator of Forests	2,500	0	0	12,600	0	0	.....			.....		
Passage money and Travelling allowance to do.	.....			3,196	1	0	.....			.....		
Total Profit...Rs.	1,03,497	5	4	52,060	2	2	.....			.....		

W. A. FENNER,

Conservator of Forests in Sind.

B.

ABSTRACT STATEMENT showing the Yield of Government

Names of Tuppas.	Area in Acres.		Yield of Timber per Tuppa.		Yield of Boonds per Tuppa.		Yield of Rafters per Tuppa.		Yield of Firewood per Tuppa.	
			1869-70.	1870-71.	1869-70.	1870-71.	1869-70.	1870-71.	1869-70.	1870-71.
			C. ft.	C. ft.	By hd.	By hd.	By hd.	By hd.	Mds.	Mds.
Tuppa Ghotkee	16,413	11	...	85	...	...	...	183	51,300	41,240
„ Sukkur	66,112	.	3,470	770	200	290	31,973	27,071	91,462	67,299
„ Rohree	43,740	23	1,856	1,325	100	350	25,840	17,912	39,487	23,380
„ Kundiaro	23,340	29	1,030	88	...	5,151	2,125	18,574	10,200	17,134
„ Nowshera	28,819	12	13,717	2,637	200	400	9,200	7,700	126,731	150,350
„ Rana	32,290	12	150	1,165	...	265	5,000	19,940	33,087	40,074
„ Srekat	18,772	18	13,152	3,050	...	312	5,200	327	124,812	103,410
„ Meanee	9,086	24	10,478	1,990	500	...	...	...	23,502	21,856
„ Oonerpoor	22,078	...	12,096	4,021	125	...	6,200	3,430	160,882	139,760
„ Katiar	8,280	11	...	...	...	...	...	...	32,442	18,668
„ Laikpoor	18,594	7	44	...	...	...	...	...	57,012	45,925
„ Soorjanee	19,693	6	20	...	30	...	...	...	874	.....
„ Veeran	25,074	...	153	61	...	600	...	...	19,381	8,110
Forests under Dawk Moonshies	19,559	14	25	32	...	400	200	2,000	115,950	134,460
Total	352,460	7	56,191	16,430	1,155	7,774	85,738	97,142	887,072	811,666
Revenue realized on the above...Rs.	.....	..	22,111	6,617	64	365	2,785	3,276	147,230	123,151

Forest during the years 1869-70 *and* 1870-71.

Other Minor Forest Product.		Grazing Fees.		Total Receipts.		Total per Acre and Annum.		Total per Acre and Annum on the whole year.		Yield in Cubic Feet per each Tuppa per Acre and per Annum.	
1869-70	1870-71	1869 70	1870-71	1869-70.	1870-71.	1869 70.	1870-71.	1869-70.	1870-71.	1869-70	1870 71.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		
92	40	1,001	1,431	10,035	8,380	1 5 3	0 8 2	..	.	11·213	4·407
3,916	5,041	3,892	3,771	27,056	23,693	0 11 9	0 5 8	. . .	.	4·890	2·
3,775	2,149	2,784	3,193	15,404	10,898	0 0 9	0 4 0	.	. .	2·315	1·174
3,813	3,030	2,444	2,238	8,719	8,748	0 8 2	0 6 0	..		1·174	1·655
1,881	2,405	2,709	2,713	34,489	30,758	1 3 0	1 1 0	.. .	.....	8·826	0·303
3,997	3,914	4,162	4,660	13,815	16,092	0 5 9	0 8 0	...	. . .	1·570	2 808
4,540	4,572	2,025	2,689	32,988	25,547	1 5 2	1 5 9	0 12 2	0 9 2	9·720	9·854
3,555	3,492	1,972	2,227	11,844	8,789	1 2 2	0 15 6	.	.. ..	5 402	4 129
3,329	2,433	2,618	2,798	35,727	25,721	1 4 6	1 2 2	.....	.	10·030	11·743
2,678	1,283	1,628	1,539	6,404	4,255	0 9 5	0 8 3		. .	5·213	3·945
504	512	1,497	1,772	6,355	5,446	0 4 6	0 4 8		.	4·170	4 322
337	384	1,978	2,389	2,393	2,773	0 1 7	0 2 3	. .	.	0·078	..
1,591	1,090	2,530	3,051	6,388	5,752	0 3 9	0 3 8	... ..	..	1·249	0 583
2,333	1,291	1,117	1,228	29,166	25,004	.	.....	. .	..		...
.	.	...	...	.....	... ..	.	.... .	.	. .	...	...
36,336	32,242	32,357	35,705	2,40,883	2,01,356	. ..	... ..	..	. .	.	...

W. A. FENNER,
Conservator of Forests in Sind.

C.

TOTAL YIELD of the Forests in cubic feet.

	1869-70.	1870-71.
	Cubic Feet.	Cubic Feet.
Timber	56,191	16,430
Boondsa, at 62 cubic feet per 100	707	4,819
Rafters, at50 cubic feet per 100	42,832	48,571
Firewood, at 175 cubic feet per 100 maunds	1,552,376	1,420,415
Total on 352,460 acres	1,652,106	1,490,235
Total per acre and annum	5·20	4·23
	Rs.	Rs.
Amount realized on the above	1,72,190	1,33,409
Add—Grazing Fees and minor produce	68,693	67,947
Total Gross Receipts on 352,460 acres	2,40,883	2,01,356
Total per acre and annum	0 12 2	0 9 2

W. A. FENNER,
Conservator of Forests in Sind.

D.

DETAILED STATEMENT showing the Expenditure of the Sind Forest Department for the year 1870-71 *against* 1869-70.

Items.	1869-70.	1870-71.	Reduction in 1870-71.	Increase in 1870-71.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Cutting and Boating Wood Fuel..	70,793 14 4	69,470 4 8	1,323 9 8	.....
Stationery	550 2 5	654 12 10	.....	104 10 5
Clearance of Canals.....	6,437 1 6	3,685 14 3	2,751 3 3	.....
Fixing Durries, Hedging young Trees, and cutting Roads	800 1 0	670 13 0	129 4 0	.....
Plantation	7,384 10 4	6,875 9 10	509 0 6	.....
Purchase of Bullocks and Camels.	90 0 0	185 0 0	.....	95 0 0
Compensation for Lands taken within Forest limits.....	.....	1,447 3 10	.....	.....
Sundries	1,334 12 5	1,811 0 6	.....	476 4 1
Carriage of Records	289 7 6	331 7 2	.....	41 15 8
Cutting and squaring Baubool Sleepers	3,217 3 4	19,708 14 0	.....	16,491 10 8
Cutting Trees on account of erosion of the River.....	995 9 0	725 4 6	270 4 6	.....
Dead Stock	384 6 1	278 8 0	105 14 1	.....
Surveying Forests	8,879 9 10	4,142 10 8	4,736 15 2	.....
Office Rent	383 3 7	270 15 6	112 4 1	.....
Feed of Cattle	55 8 6	118 0 0	.....	62 7 6
Cutting Timber for sale	2,986 0 7	840 13 7	2,145 3 0	.....
Service Stamps	.....	636 0 0	.....	.....
Batta or Travelling Allowance ...	5,613 11 0	8,248 14 6	.....	2,635 3 6
Salaries	38,569 10 3	50,580 0 0	.....	12,010 5 9
Total.....Rs.	1,48,764 15 8	1,70,682 2 10	12,083 10 3	31,917 9 7

W. A. FENNER,

Conservator of Forests in Sind.

E.

STOCK on hand on the 31st March 1871.

Firewood on the Wood Stations and in Forests.		Building Wood in Forests.		Timber Stored at Kotree Wood Depôt.												Total Value of Stock on hand.	
				Beams.		Boonds.		Rafters.		Knees.		Banbool Sleepers.		Planks.			
1869-70.	1870-71.	1869-70	1870-71	1869-70	1870-71	1869-70	1870-71	1869-70	1870-71	1869-70	1870-71	1869-70	1870-71	1869-70	1870-71	1869-70	1870-71
mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.
268,268	243,967	...	368	1,262	1,492	...	...	3,910	...	200	249	...	12,434	71	.....	...	...
Estimated Market Value.		Estimated Market Value.		Estimated Market Value.		Estimated Market Value.		Estimated Market Value.		Estimated Market Value.		Estimated Market Value.		Estimated Market Value.		Estimated Market Value.	
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
49,630	39,035	...	184	1,088	375	...	...	275	...	67	63	...	31,085	153	.....	51,213	70,742

W. A. FENNER,

Conservator of Forests in Sind.

F.

COMPARATIVE STATEMENT of Income and Expenditure of the Sind Forests for the past ten years.

	1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Firewood	66,189	37,104	1,14,271	1,69,266	1,68,145	1,55,771	1,56,200	1,52,656	1,47,230	1,23,151	12,89,983
Building Wood	9,777	16,407	21,253	36,910	38,394	38,563	41,279	12,765	24,960	10,259	2,50,567
Grazing Fees	29,625	31,997	28,639	32,890	32,556	28,747	31,933	35,016	32,357	35,705	3,19,465
Jow (fascines of tamarisk)	677	658	538	850	1,236	493	122	174	133	315	5,196
Charcoal	1,166	1,196	899	652	859	741	1,087	1,015	1,250	1,158	10,023
Fisheries	1,477	1,582	1,685	2,015	2,584	2,844	3,355	3,094	3,415	3,809	25,860
Grasses	361	394	710	702	614	443	600	635	484	535	5,478
Lac	...	502	711	1,209	82	...	175	525	40	675	3,919
Fines	2,262	1,858	1,083	1,064	1,575	974	884	1,617	1,159	1,791	14,267
Baubool Pods	6,177	4,000	4,545	5,160	4,764	...	4,164	5,648	4,878	5,186	44,558
Recoveries of unadjusted Bills	...	...	...	...	...	...	...	...	...	...	.....
Land Revenue from cultivation within Forest limits	...	...	7,130	15,116	17,230	17,904	15,669	21,477	24,021	17,556	1,36,103
Miscellaneous, including Mangoes, Baubool, Vegetable Seeds, and Honey	937	1,966	899	444	65	578	1,724	853	955	1,216	9,637
Total.....Rs.	1,18,648	97,664	1,82,363	2,66,278	2,68,104	2,47,056	2,57,192	2,35,511	2,40,882	2,01,356	21,15,056
Expenditure.....Rs.	57,410	56,835	1,08,451	1,60,762	1,59,056	1,48,053	1,58,381	1,29,901	1,48,765	1,69,235	12,96,235
Net Profit.....Rs.	61,238	40,829	73,912	1,05,516	1,09,048	99,005	98,811	1,05,610	92,117	32,121	8,18,207

W. A. FENNER,

Conservator of Forests in Sind.

G.

STATEMENT showing the Wood Fuel supplied to several Companies during 1870-71 *in comparison to* 1869-70.

	1869-70.		Amount.			1870-71.		Amount.		
	Maunds.	S.	Rs.	a.	p.	Maunds.	S.	Rs.	a.	p.
Railway Flotilla	550,700	10	1,01,879	10	11	565,879	9	94,442	0	6
Punjab Government Flotilla	51,715	0	9,567	4	4	50,090	0	8,335	10	5
River Conservancy Department	35,879	0	6,630	3	3	35,126	0	6,223	2	9
Government Steamer "Satellite"	17,008	0	3,146	7	8	11,957	0	1,986	0	8
Messrs. McKenzie, Cosser, and Co.	32,367	0	5,987	15	9	.....	...	.....		
Political Agent at Bahawulpoor	1,250	0	231	4	0	.....	...	.....		
Ice Company	1,725	0	309	2	0	.....	...	.....		
Total	690,604	10	12,7,751	15	11	663,054	9	1,10,986	14	4

Taking the difference of supply of Steam fuel for nine months, say 483,296 maunds, at Rs. 16 per hundred maunds, and the remaining three months for 179,758 maunds at Rs. 18-8-0, and the falling off owing to the reduction of rates on this head amounts to Rs. 12,082.

W. A. FENNER,

Conservator of Forests in Sind.

H.

LIST showing the Sales of Forest Material at Kotree and Giddoo Bunder in 1870-71.

	Sale of Forest Material at Kotree.							Sale of Material at Giddoo Bunder.
		Material sold by Auction.						Sold by Auction.
	Firewood sold in retail.	Firewood.	Baubool Timber.	Bhan Timber.	Bhan Rafters.	Sleepers.	Planks.	Firewood.
	mds.	mds.	mds.	mds.	mds.	mds.	mds.	mds.
	19,972	1,800	397	359	3,980	41	62	1,450
Revenue realized...Rs.	3,541	224	219	159	101	44	62	182
	Per md.	Per md.	Per log.	Per log.	Per 100	Per Sleeper.	Per Plank.	Per Maund.
Average Rates.....	0 2 10	0 2 0	0 8 10	0 7 0	2 8 7	1 1 2	1 0 0	0 2 0

W. A. FENNER,
Conservator of Forests in Sind.

I.

STATEMENT of the Areas of the Several Forests on the Left

Name of Collectorate.	Name of Taluka.	As per the Forest Record.			Descriptive		
					That is land under Forest and Timber.	Land under Bush.	Land under Khareef cultivation.
		Name of Tuppa.	No. of Forest.	Name of Forest.	Pukka Balo.	Kutcha Belo.	Khareef.
1	2	3	4	5	6	7	8
					A. G.	A. G.	A. G.
Shikarpoor.	Oobaoora	Ghotekee	1	Ranotee	7,665 30	.....	.....
	Ghotekee	"	2	Jemshero	6,185 8	.....	.....
	"	"	3	Derwesh	.....	1,489 23	29 17
	Ghotekee and Syudpoor	Rohree	4	Bahab	3,875 10	1,998 7	37 29
	"	"	5	Boodh	963 20	.....	.....
	Syudpoor	"	6	Suddooja	2,778 36	6,079 38	677 17
	Syudpoor and Rohree.	"	7	Shahpoor	4,330 30	2,500 8	.....
	Rohree	"	8	Soonder Belo	2 16	.....	.....
	"	"	9	Phonaree	587 17	.....	.....
	"	"	10	Hussein Beylo	1,679 2	1,606 25	.....
	"	"	11	Azeezpoor	880 10	.....	.....
	"	"	12	Tarrechanee	.....	211 16	.....
	"	"	13	Dring	1,467 27	.....	.....
				Total	30,416 6	13885 27	744 23
Hydrabad.	Kundiara	Kundiara	14	Mahbut Dero	2,953 5	410 5	.....
	"	"	15	Bhowar	4,090 6	4,357 0	219 26
	"	"	16	Samtia	809 25	.....	44 28
	"	"	17	Kamal Dero	1,352 26	.....	.....
	Nowshero	Nowshero	18	Bhortee	5,245 16	2,166 0	475 25
	"	"	19	Dulleepota	398 16	5 19	5 29
	"	"	20	Lullea	2,787 25	.....	.....
	"	"	21	Khiro Dero	9,370 15	1,416 17	.....
	Sukkurund	Rana	22	Nasree	415 27	.....	175 8
	"	"	23	Mud	851 12	980 36	.....
	"	"	24	Mehrabpoor	267 33	644 27	98 13
	"	"	25	Maree	6,092 7	592 35	52 1
	"	"	26	Ketee Jurio	192 11	942 32	.....
	Halla	"	27	Rana	911 19	102 28	356 11
	"	"	28	Noorketee	1,362 9	.....	1,316 24

A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.
.....	.....	.....	.....	.....	.....	.....	463 22	8,129 12
.....	.....	14 28	.....	.....	.....	.....	359 7	6,559 3
.....	.....	167 1	.....	.....	2 28	.....	36 7	1,724 36
.....	445 4	2,173 17	.....	.....	8 15	.....	447 8	8,985 10
.....	243 12	10 25	.....	.....	.....	.....	.....	1,217 17
.....	479 7	3,016 28	5 39	.....	.....	0 5	660 31	13,699 1
43 15	361 34	2,503 10	.....	.....	.....	2 1	1474 8	11,215 16
.....	5 34	1,458 26	.....	.....	.....	.....	514 19	1,981 15
.....	.....	.....	.....	.....	.....	.....	.....	587 17
.....	23 19	20 30	2 20	.....	.....	.....	74 25	3,407 1
.....	.....	.....	.....	.....	.....	.....	.....	880 10
.....	.....	.....	.....	.....	.....	.....	19 28	230 31
.....	.....	43 3	.....	.....	.....	.....	31 32	1,512 22
43 15	1,558 20	9,408 8	8 19	.....	11 3	2 6	4,081 27	60,159 31
.....	242 35	3,677 16	.....	.....	2 10	1 24	757 26	8,045 1
218 0	644 21	.....	.....	.....	3 3	0 16	977 7	10,539 39
.....	166 9	2,059 37	.....	.....	.....	19 10	291 1	3,390 30
.....	.....	.....	.....	.....	.....	9 38	2 15	1,364 39
97 28	844 1	1,036 1	.....	.....	19 6	27 11	878 25	10,789 33
.....	424 30	.....	4 14	.....	.....	2 18	25 25	866 31
.....	.....	1,216 30	.....	.....	.....	7 0	78 0	4,089 15
484 0	41 15	906 22	.....	.....	.....	46 0	808 24	13,073 13
202 17	91 7	580 33	17 21	.....	.....	12 30	60 21	1,556 4
.....	162 7	525 32	.....	.....	.....	.....	121 27	2,641 34
222 17	185 37	.....	.....	.....	.....	.....	218 14	1,637 21
.....	77 26	6,738 24	.....	.....	.....	5 24	1,193 31	14,752 28
22 14	.....	816 17	.....	.....	.....	.....	151 8	2,125 2
79 10	.....	122 28	.....	.....	.....	.....	51 23	1,626 39
644 6	.....	.....	.....	.....	.....	.....	94 33	3,417 32

					A. G.	A. G.	A. G.
Hydrabad.	Halla	Rana	29	Kutcha Noorketee.	35 0	953 15	.....
	"	"	30	Bhanote	335 38	.....	234 13
	"	Sekhat	31	Ketee Sideck	1,057 3	.....	13 3
	"	"	32	Khanote	1,348 2	.....	3,543 32
	"	"	33	Khebranee	315 34	217 23	.....
	"	"	34	Sekhat	947 2	818 5	59 8
	"	"	35	Jakree	1,286 10	192 4	180 26
	"	"	36	Muttaree	2,356 9	.....	290 11
	Hydrabad	Meeanee	37	Ghullee	231 19	.....	52 2
	"	"	38	Meeanee	1,861 16	.....	1,980 17
	"	"	39	Goondee	165 35	.....	.....
	"	"	40	Katree	257 31	.....	133 19
	"	"	41	Nawab	84 37	.....	80 19
	"	Giddoo Bunder	42	Shah Mucklai	80 15	.....	230 22
	"	Katiar	43	Hoosree	420 22	.....	.....
	"	"	44	Khatro	410 21	.....	.....
	"	"	45	Khuthur	1,643 21	.....	1,181 6
	Goonee	"	46	Kheerdrihee	191 9	.....	.....
	"	"	47	Tikoor	745 20	.....	108 38
	"	"	48	Katiar	895 13	.....	.....
	"	"	49	Khoker	594 31	.....	.....
	"	Laikpoor	50	Boodhka Tukkur	729 28	174 8	.....
				Total	53,094 28	13974 14	10862 21
Kurrachee.	Meerpoor Buttora	Laikpoor	51	Moolchund	3,917 8	1,010 37	290 36
	"	"	52	Laikpoor	7,345 21	.....	.....
	Beylo	"	53	Khuddee	4,147 28	.....	.....
	"	"	54	Phutta	125 6	.....	.....
	"	Soorjanee	55	Mukboolo	463 33	.....	.....
	"	"	56	Pennah	6,149 22	.....	.....

A. G.	A. G.	A G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.
735 13	.....	1,749 13	.....	.....	.....	.....	217 38	3,690 39
222 30	.....	.....	.....	.....	.....	.....	48 12	841 13
.....	.....	1,662 27	.....	.....	.....	.....	.....	2,732 33
362 19	81 27	123 39	.....	.....	.....	5 32	467 6	5,932 37
.....	94 1	62 25	.....	.....	.....	.....	70 15	760 18
.....	20 6	.....	5 16	.....	.....	.....	216 31	2,066 28
130 5	.....	103 35	.....	.....	.....	.....	32 31	1,925 31
773 16	444 30	1,373 12	.....	.....	.....	9 35	105 38	5,353 31
.....	.....	2,498 19	.....	21 8	.....	.....	237 22	3,040 30
761 8	.....	.....	36 33	.....	.....	9 15	267 17	4,916 26
.....	.....	.....	.....	.....	.....	.....	27 1	192 36
352 26	.....	.....	10 37	.....	.....	.....	0 38	755 31
.....	.....	.....	.....	.....	.....	.....	15 5	180 21
19 36	1 29	.....	6 36	.....	.....	6 37	64 39	411 14
.....	.....	.....	.....	.....	.....	.....	.....	420 22
.....	.....	.....	.....	.....	.....	.....	5 39	416 20
45 27	.....	.....	.....	.....	.....	2 33	62 34	2,936 1
.....	3 6	.....	.....	68 36	.....	14 25	12 11	290 7
9 10	.....	111 14	.....	619 37	.....	7 22	106 3	1,708 24
.....	.....	.....	.....	.....	.....	.....	57 2	952 15
93 24	.....	569 2	.....	36 11	.....	.....	262 14	1,556 2
5 5	.....	52 9	.....	.....	.....	.....	13 13	974 23
5,481 31	3526 7	25987 35	81 37	746 12	24 19	189 10	8,006 9	1,21,975 23
134 35	.....	.....	.....	7 28	.....	35 36	56 39	5,454 19
.....	.....	.....	.....	.....	.....	24 17	36 19	7,406 17
232 31	.....	.....	.....	82 21	2 6	30 26	4 30	4,500 22
.....	.....	131 32	.....	.....	.....	1 8	.....	258 6
.....	.....	.....	.....	.....	.....	8 20	23 28	496 1
.....	.....	.....	.....	.....	.....	.....	20 6	6,169 28

					A. G.	A. G.	A. G.
KURRACHEE.	Beylo	Soorjanee.....	57	Soosatree.....	37 35	.....	.....
	"	"	58	Kheersur	1,357 28	.....	.....
	"	"	59	Hoodeyranee	5,379 12	.....	.....
	"	"	60	Soorjance.....	1,318 18	.....	.....
	"	"	61	Gunj	992 35	719 0	115 19
	"	"	62	Huzzaree.....	1,792 32	.....	43 12
				Total.....	33,027 38	1,729 37	449 27
		Total Areas of					
Shikarpoor Collectorate					30,416 6	13885 27	744 23
Hydrabad do.					53,094 28	13974 14	10862 21
Kurrachee do.					33,027 38	1,729 37	449 27
				GRAND TOTAL	1,16,538 32	29589 38	12056 31

Bank of the Indus of the Province of Sind.

AREA.

Land fit for Khareef cultivation but not cultivated.	Land under Rubbee cultivation.	Land fit for Rubbee cultivation but not cultivated.	Gardens.	Salt Land.	Hamlets.	Roads and Embankments.		TOTAL AREA.
Nuhwar Khareef.	Sailabee.	Nuhwar Sailabee.	Bagh.	Kallur.	Gates.	Rusta and Bunds.	Wahs Dhunds Water. Dhorees.	
9	10	11	12	13	14	15	16	17
A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.	A. G.
.....	.....	.....	.....	.....	.....	.....	1 16	39 11
.....	.....	.....	.....	.....	.....	15 25	6 8	1,379 21
2 31	.....	.....	.....	.....	.....	15 8	113 24	5,510 35
37 12	.....	.....	.....	.....	.....	6 25	24 30	1,387 5
194 0	.....	.....	.....	90 19	8 5	8 16	99 13	2,227 27
630 35	.....	.....	.....	3 11	6 9	.....	6 19	2,482 38
1,232 24	.....	131 32	.....	183 39	16 20	146 21	393 32	37,312 30
43 15	1,558 20	9,408 8	8 19	.....	11 3	2 6	4,081 27	60,159 34
5,481 31	3,526 7	25987 35	81 37	746 12	24 19	189 10	800 0	1,21,975 23
1,232 24	.....	131 32	.....	183 39	16 20	146 21	393 32	37,312 30
6,757 30	5,084 27	35527 35	90 16	930 11	52 2	337 37	12,481 28	2,19,448 7

W. A. FENNER,

Conservator of Forests in Sind.

J.

DETAILED STATEMENT of the Area of each of the Forests on the Right Bank of the River Indus.

Names of "Tuppas."	Names of Forests.	Area of Permanent Land. Acres.	Area of Temporary Land thrown up by the River. Acres.	Total Area. Acres.	Interior Detail. Permanent Cultivation. Fields.	Permanent Cultivation. Acres.	Temporary Cultivation. Area according to "Tuppedar's" measurement.
1	2	3	4	5	6	7	8
VEERAN	Garko	4,079	.....	4,079	.....	.....	.....
	Shah Lounko	1,517	173	1,690	1	2	90
	Lullung	5,151	.....	5,151	.....	.....	30
	Hellaya	2,898	.....	2,898	.....	.....	.....
	Soanda	1,636	478	2,114	.....	.....	172
	Veeran	3,916	5,226	9,142	.....	.....	57
		19,197	5,877	25,074	1	2	349
OONERPOOR	Oonerpoor	3,587	6,806	10,393	.....	.....	632
	Gugh	1,296	.....	1,296	.....	.....	.....
	Karokho	1,492	209	1,701	.....	.....	.....
	Majunda	1,540	.....	1,540	.....	.....	.....
	Noorpoor Bhoto	5,268	2,480	7,748	3	129	.....
		13,183	9,495	22,678	3	129	632

DAWK MOONSHEE OF SEHWAN	Kurmpoor	948	839	787	.....	.....	.....
	Seeta	.....	419	419	.....	.....	.....
	Mugsee	1,483	.....	1,483	.....	.....	.....
	Kettee Mohbut	285	.....	285	4	253	.....
		2,716	1,258	3,974	4	253	.....
DAWK MOONSHEE OF LADKANO.	Kunnooree	3,196	434	3,630	9	93	.....
	Goodh	5,968	.....	5,968	2	9	.....
	Ooboaro "Kheiro"	2,366	3,210	5,576	.....	.....	4
		11,530	3,644	17,174	11	102	4
SUKKUR	Kadoorpoor	2,485	.....	2,485	7	106	.....
	Bindee Dharija	5,872	1,082	6,954	1	10	.....
	Shah Beylo	8,339	5,094	13,433	13	425	.....
	Khea Bindee	3,118	.....	3,118	1	4	.....
	Abad	5,548	56	5,604	6	242	.....
	Kot Shahoo	5,449	650	6,099	.....	.....	.....
	Kadurdinee	2,190	116	2,306	11	364	2
	Bagurjee	8,336	5,584	13,920	.....	.....	.....
	Anduldul	9,358	2,835	12,190	1	3	.....
		50,695	15,417	66,112	40	1,154	2
		97,321	35,691	1,33,012	59	1,640	987

W. A. FENNER,
Conservator of Forests in Sind.

No. 1604 of 1871.

Revenue Department:

Commissioner's Office, Kurrachee, 19th June 1871.

1. Submitted to Government.

2. The year has not been a fortunate one.

3. The Conservator's report shows the receipts of the two last years to have been respectively:—

1869-70.....	Rs.	2,40,882	11	2
1870-71.....	„	2,01,356	5	6
or decrease in the latter of.....	Rs.	39,526	5	8

4. This decrease is confined almost entirely to three items—

Building-wood	Rs.	14,700	15	9
Firewood	„	24,079	1	5
Revenue from cultivation	„	6,464	5	7

5. The Conservator attributes the falling off in sale of building-wood to "the continued depressed state of trade, which affects every Department alike." In the previous year 3,664 cubic feet of baubool timber, equivalent in value to about Rs. 3,100 were purchased from Sind by the Bombay Gun Carriage Department. There was no similar transaction last year, and deducting the above, the diminution in local demand will stand in round numbers at Rs. 11,600. The decrease in realisations from sale of firewood amounts to Rs. 24,079-1-5. The Conservator would look to the reduction in the price made last year as the main cause. This was to be expected as regarded fuel supplied to steamers plying on the Indus, the consumption of which was not likely to increase, but it cannot be supposed for a moment it is intended to be shown that lowering the price was the cause of a lesser quantity being disposed of. Statement G further shows that there was much less fuel taken this year than before.

6. The following:—

	1869-70			1870-71		
	Mds.		Rs.	Mds.		Rs.
1. Railway Flotilla	550,700	=	1,01,879	565,879	=	94,442
2. Punjaub do.	51,715	=	9,567	50,090	=	8,335
3. River Conservancy Department	35,879	=	6,630	35,126	=	6,223
			1,18,076			Rs. 1,09,000
	Difference Rs. 9,076					

used much the same quantity as usual, and on that quantity the difference in price amounted to Rs. 9,076,—see above.

7. Others took less or none, such as:—

	1869-70			1870-71		
	Mds.		Rs.	Mds.		Rs.
4. Government Steamer "Satellite" (Less) ...	17,008	=	3,146	11,957	=	1,986
5. Messrs. MacKenzie, Cosser, and Co. (None)	32,367	=	5,988			
6. Political Agent Bhawulpoor (None)	1,250	=	231			
7. Ice Company (None) ...	1,725	=	309			
			9,674			Rs. 1,986
	Difference Rs. 7,688					

No. 4, because the steamer had not to be used so much; No. 5, from the Company ceasing to run steamers on the river; and the other two making no demand. The difference in price on issues to Nos. 1, 2, and 3

amounted to ..... Rs. 9,076
of less issues to Nos. 4, 5, 6, and 7 ,, 7,688

making a total of ..... Rs. 16,764

This deducted from Rs. 24,079, leaves Rs. 7,315 worth of fire-wood less sold in the general market during the year 1870-71 than in the preceding one. This deficiency is clearly due to something else than reduction of price, and to some extent may correctly be laid to the same cause which lessened the sale of building timber, viz. the depressed state of trade generally.

Rs. 24,079
,, 16,764
Rs. 7,315

8. Though present times are undoubtedly unfavourable, and account in a great measure for the falling off in returns from the Forest Department, it has been felt for some time past that more might be made of the Forests with a more suitable establishment. Hitherto there has only been a Forest Ranger in charge of the whole, with his Head Quarters at Kurrachee, one Assistant stationed in Upper Sind, two European Inspectors who remained in Lower Sind with no particular charge; and Tuppadars and Peons, the former to collect revenue, and see after sale of timber, and the latter to serve as watchers.

9. It was impossible for the Forest Ranger to do much more than just visit the Forests once during the cold season. For the remainder of the time they were left to the care of the Tuppadars and Peons, who knew little or nothing of Forestry, or how to dispose of material with best advantage to the Department, and at the same time meeting the wants of the people about. All applications for timber had to be sent to the Forest Ranger, wherever he might be, and the delays and inconveniences which attended this course tended materially to check the sale of wood, which might with benefit have been removed, most of the large Forests being overstocked in many parts. It was therefore recommended that a new system should be introduced, that the Forests should be divided into three charges or divisions, similar to the three Collectorates in which they lie; that there should be one Conservator over all, with an Assistant Conservator to each division, who would reside within his charge, become thoroughly acquainted with it, and be ready on the spot to receive all applications, and to arrange for the regular and systematic disposal of surplus timber. The two Inspectors to be done away with after the new Establishment has been working a year, and a better set of subordinate Native Forest Officers entertained.

10. These proposals having been sanctioned by Government were ordered to be introduced from the beginning of this year, and it is anticipated the best results will be secured.

11. The auction sales were intended to promote two objects: First, to bring wood within easy reach of purchasers, and so let them learn what could be obtained from the Forests; and secondly, that

some idea might be formed of the real market value of Forest material. Previously the price of every thing had been arbitrarily fixed by the Forest Ranger, who found out what the cost of cutting and carrying was, then added a fancy sum as Royalty, and the total was a fixed lump sum, which was considered the value of the material supplied from the Forests. That the rates so arrived at were far too high is conclusively shown by the results of the auctions, at which, according to the Conservator's report, baubool and kundai realised only Rs. 12-8-0 per 100 maunds, while the rate formerly fixed by the Forest Department, good, bad, and indifferent, was Rs. 18-8-0 per 100 maunds for fuel to steamers, and Rs. 20 for firewood at the Depôt. These rates were last year reduced to Rs. 16.

12. These auctions however have only been attempted as yet on a small scale at only two places, Kotree and Giddoo ke Tanda, and there only few merchants attended to bid. It is proposed this year to extend the system and have sales at the large centres—Shikarpoor, Sukkur, Hydrabad and Kurrachee; with the three first there is cheap water communication from neighbouring Forests, and for the last an arrangement has been come to with the Railway authorities, by which wood will be brought down at a cheap rate, whenever empty waggons are being sent from Kotree. The fullest and earliest publicity will be given as to date and place of sale. It will be better therefore to have this year's experience also before any opinion is formed or decision arrived at. The firewood alluded to in the 6th para. of Mr. Fenner's report is only used at Kurrachee, because no other can readily be got, but it will never compete with baubool or kundai, if these two last can be readily obtained, and at a fair rate.

13. The cost of cutting and carriage of fuel, as shown in correspondence submitted last year, seemed to be very high. This is being carefully looked into, and it is expected that of the sum now charged for 100 maunds of fuel, Rs. 16, *more* than two Rupees will be found to be Royalty over and above the cost of presenting it at the place of sale.

14. The Commissioner does not concur with Mr. Fenner in considering it advisable to return to the old rate of Rs. 20. The average of the auction sales only giving Rs. 12-8-0, it is clear Rs. 20

would be far too much. Indeed, as auction sales are to be continued, fixing so much higher a rate for private sale at the Depôt Store would be tantamount to closing the Depôt.

15. The reason assigned by Mr. Fenner for raising the Royalty to the very high figure of Rs. 7-13-0 per 100 maunds gives no help towards finding out what would be a just and suitable amount. He would do so to make it "correspond with the fees levied" at the Meanee and adjoining Forests, which have continued at 1¼ anna per maund, fees which, being fixed by himself, would make him still continue to rule the market, and not try to find what was the real market value of the articles.

16. The Royalty charge certainly represents the return to Government from Forest produce, but it would never do to gauge that charge by what the lands would yield were they under cereal cultivation. This can no more be arbitrarily fixed on the one than on the other. It is very possible, indeed may be considered certain, that the lands appropriated for Forest purposes would yield a much higher rate per acre were they used for cereals, cotton, indigo, sugar-cane, &c. But these Forests were found existing when the country came into British possession, their continuance is most necessary for the supply of timber and fuel, and all that can be done is to see that Forest produce shall be sold at such a rate, that while it gives some return to Government, the easy introduction of the produce into the general market shall not be checked. If there should be any check, the timber grown in the Forests will remain on the hands of the proprietor and rot uselessly. It remains yet to be seen whether the fee of 1¼ anna levied for the right of cutting and removing timber from the Meeanee and other Forests near Hydrabad, is not too heavy. Though there are several Forests in that neighbourhood overstocked with wood, complaints are common of the high price of firewood in that city, and there has been a falling off in sales this year. This point cannot be settled until the true market value is ascertained by continued auction sales in the city. These will be conducted this year.

17. The supply of sleepers on hand is very large, but it is to be hoped these will soon be disposed of on the commencement of the

Indus Valley Railway. It has been found that the old rates were unnecessarily high, and cannot be maintained. Careful inquiry has shown that sleepers can be supplied from the Sind Forests, set down at Sukkur for instance, at the following rates :

Partly squared with axe, partly with saw .....Rs. 1 8 0
Squared with saw only .....Rs. 1 14 0

and at this rate they have been offered to the Railway authorities. Should the stock in hand be so disposed of, these sleepers will have to go for Rs. 1-14-0 instead of Rs. 2-8-0, the price mentioned by the Conservator in his report. The prices above mentioned include 8 annas Royalty on each sleeper, so that if during the next few years 600,000 sleepers are supplied from Sind, from existing Forests, and this may easily be done, there will be a clear gain to Government in that time of Rs. 3,00,000.

18. The increase in the expenditure is for the completion of the surveys of the Forests, which will not again occur for compensation for land taken up, and for the extra officers who were deputed to Sind, in reference to the supply of sleepers. These gentlemen will now, or at least from the 1st June 1871, be incorporated in the permanent establishment, and be budgetted for accordingly.

19. The non-occurrence of any serious or extensive fires in the Forests is satisfactory.

20. The loss by erosion is what must always occur when the Forest fronts are acted upon by the River Indus. The remedy suggested last year by Mr. Pengelly may have effect in some places, but no opportunity appears to have offered for testing its merits. Mr. Fenner departed on leave directly after submitting his report, and explanation on this point could not be obtained from him. Attention will be drawn to the orders for the experiment being tried on a small scale. It was reported, though during the working season, that in one Forest, that of Khirro Dhera, the plan of promptly removing the standing timber was successfully carried out. Though erosion was very rapidly going on, all the timber in danger was cut and removed to a safe locality in time. The best remedy is undoubtedly to give up the idea of attempting to maintain permanent Forests immediately

on the banks of the Indus, and to look to their extension in a safe direction when extension is found necessary. The attention of the Conservator and the Executive Officers will be particularly directed to this important subject during the present year, and as each of the latter will not have more under his charge than he can well and thoroughly attend to, there will be better means of forming a good judgment what part of present Forests it is worth while to retain and protect, and what may with advantage be given up for an equivalent in a more sure locality or altogether.

21. The tables attached to the Report do not give satisfactory means of comparison on all points. The attention of the Conservator will be drawn to this also, so that whenever a table for one year may be given, one for the previous year be submitted also. This is particularly necessary in tracing the history of sales of produce.

22. The Forest Ranger (lately changed to Conservator of Forests) Mr. Fenner, with Dr. Schlich, proceeded to the Punjaub in the autumn, to meet the Inspector General, Dr. Brandis. Opportunity was taken of further directing Mr. Fenner to visit the Forests in the Northern Punjaub and North-West Provinces, that he might observe the practice followed in them; Dr. Schlich returned to Sind in December, and held charge of the Ranger's office until Mr. Fenner rejoined in February. During this time and until the close of the season Dr. Schlich gave his earnest attention and worked hard in making himself acquainted with the position, nature, and extent of as many of the Forests as he could visit. He drew attention to several sound practical improvements which he suggested might be introduced, and which have been since ordered to be carried into effect. His report on the probable yield of sleepers from the forests is under preparation, and will be submitted as soon as the maps to accompany it have been completed. Dr. Schlich has verbally brought to notice the great assistance he has received from Mr. Pengelly's ability and judgment, and from Mr. Dessaie's zeal and energy, both of those gentlemen having been employed directly under him.

23. Mr. Fenner remarks in regard to Mr. Hexton, who has been in charge throughout the year of the Upper Sind Division, that

"he continues to do well." The Commissioner was able to judge himself of the intelligent interest and care given by this gentleman to the Forests under his charge.

W. L. MEREWETHER, Colonel,
Commissioner in Sind

Administration Reports.

No. 3283.

REVENUE DEPARTMENT.

Bombay Castle, 7th July 1871.

Memorandum from the Commissioner in Sind, No. 1604, dated 19th June 1871—Submitting, with his observations, the Annual Forest Administration Report of the Conservator of Forests in Sind, for the year 1870-71.

RESOLUTION.—Financially the year's administration has not been successful.

2. In the Budget the receipts were estimated at Rs. 2,65,000, whereas only Rs 2,01,356 were realized. The expenditure amounted to Rs. 1,70,682, leaving only Rs. 30,674 as the net receipts.

In the preceding year Rs. 2,40,882 were realized, and Rs. 1,48,764 expended, showing a profit of Rs. 92,118.

3. The falling off in the receipts, amounting to Rs. 39,526, is confined chiefly to three items:—

Building wood	Rs.	14,700
Firewood	„	24,079
Revenue from cultivation and minor items	„	6,607
	Rs.	45,386
Deduct—Increase on account of grazing fees and other minor items	„	5,860
	Rs.	39,526

4. The decrease in the receipts from building and firewood is accounted for partly by a falling off in the demand attributable to the general depression in trade, but principally to the large reduction that has been made in the prices charged.

5. The increase in the charges is due to the employment of additional officers, and to the expense incurred in cutting and squaring baubool sleepers. The cost of the latter operation amounted to Rs. 16,491, and will be hereafter recovered, with a large margin of profit, by the sale of the sleepers now in stock.

6. His Excellency in Council is satisfied that the rates which were previously charged for both timber and firewood were far too high. Considerable reductions have already been made with the sanction of Government. The plan that has now been adopted of ascertaining what is the real market value of this wood by public auction is the only true and satisfactory test that can be applied. It is quite fallacious to argue that because land will yield so much if cultivated, the Forest produce from the same land ought to yield an equivalent.

7. Careful and close supervision over the charges for cutting and carrying will no doubt result in considerable saving of expense. The Commissioner calculates that if Rs. 16 are charged, instead of Rs. 20 as formerly, for each 100 maunds of fuel, there will be a net profit of over Rs. 2, and he calculates that sleepers squared with the saw can be sold for Rs. 1-14-0 each, leaving a profit of eight annas. The Conservator, Mr. Fenner, on the other hand, estimates the value of each sleeper at Rs. 2-8-0, calculates the cost of conversion and delivery at Rs. 1-8-8, and considers that a profit of Rs. 0-15-4 ought to be realized. The most careful inquiries should be instituted on this most important point before any price for the future is fixed, or any agreement entered into for the supply required by the Indus Valley Railway.

8. It is satisfactory to find that no material damage has occurred from fires during the year under report. The losses occasioned by erosion are unavoidable.

9. Government are glad to receive satisfactory accounts of the zealous manner in which the officers of the Department have conducted their duties, and anticipate the best results from the new organization that has recently been introduced.

F. S. CHAPMAN,
Chief Secretary to Government.

To

The COMMISSIONER IN SIND,
The ACCOUNTANT GENERAL.